THE ALBERTA SPECIAL EDUCATION STUDY

Organizing Special Education for Moderately handicapped pupils in Alberta Schools:

A Study of Selected Administrative Arrangements and Support Services

COMPLETE REPORT

Planning and Research

Alberta EDUCATION

SUMMER, 1977

RWOC

EXECUTIVE SUMMARY
of the
ALBERTA SPECIAL EDUCATION STUDY

WHY THE SPECIAL EDUCATION STUDY?

Between 1971 and 1976 there was a rapid increase in special education teacher positions for the instruction of moderately handicapped pupils (from 584 to 1,250 positions). Difficulties in filling teacher positions and finding sufficient professional support services accompanied this increase. The assumption that some type of segregation was necessary for effective remediation required examination.

This study reviewed the organizational, administrative and financial arrangements during 1975 - 1976, and related these to both the AMOUNT and ADEQUACY of special education services.

A number of specific questions were posed to guide the several parts of the study.

PART I: WHAT ARE THE FACTORS ASSOCIATED WITH (1) THE AMOUNT OF SPECIAL EDUCATION SERVICES PROVIDED BY ALBERTA SCHOOL SYSTEMS AND (2) THE EQUITY OF THE DISTRIBUTION OF SERVICES?

The proportion of elementary and junior high students directly supported by the SETP (Special Education Teacher Position) grant and the proportion in school programs funded by SETP, Educational Opportunites Fund (EOF) Compensatory and Remedial and Learning Disabilities Fund (LDF) grants or combinations of the three in 1975-76 were analyzed to see if any differences existed in the amount of services offered and the equity of distribution of these services according to factors assumed to be related.

Findings and Conclusions:

1. **The First Measure:** The provincial proportion of handicapped students enrolled in grade 1-9 receiving support from the Special Education Teacher position Grant (STEP) was over 6% or 20,010 students.

No significant relationships were found between amount of services provided and such factors as remoteness, size, wealth (assessment base), level of expenditures for education, population density, status as rural or urban, public or separate, type and level of staff training and other manpower factors.

Conclusion: The service was remarkably uniform across Alberta according to the factors noted above.

2. **The Second Measure:** The provincial proportion of handicapped students served under all Alberta Education special funding (SETP grant, Educational Opportunities Compensatory and Remedial, Learning Disabilities Fund, or combinations of these):

- nearly 10% (9.7%) were receiving remedial service based on all types of special funding;
- the amount of service delivered was significantly affected by four of the 14 factors;
- there was significantly more service in remote areas of Alberta and where the percentage of registered native children enrolled was high;
- the amount of service was greater in disadvantaged areas with relatively lower per pupil assessments.

Conclusion: Areas with greater needs did receive greater amounts of service.

Recommendations:

- Existing SETP, EOF and LDF grants are effective methods to provide financial support for Special Education and should be continued.

- The quality of the services provided under the special funding arrangements warrants examination.

PART II: HOW DO RESOURCE ROOMS, SEGREGATED SPECIAL CLASSES AND REGULAR CLASSROOMS COMPARE IN SPECIAL EDUCATION FOR CHILDREN WITH VARIOUS TYPES OF MODERATE HANDICAPS?

An extensive review of research literature was used to answer this question.

Findings and Conclusions:

1. Academic objectives for Educable Mentally Handicapped (EMH) pupils (50-80 IQ range) tended to be best served in non-segregated classrooms or resource rooms. Non-academic objectives for this group could be achieved in either setting.

2. Learning Disabled (LD) pupils (normal IQ range but grossly underachieving in some aspects of school work) were reported to achieve as well in regular classrooms as in segregated ones, **provided instruction is modified**. If regular instruction is not modified, the students achieved better in segregated or partially integrated classes. For non-academic development there was no difference between regular and segregated classes.

3. When considering the academic progress of mixed classes of EMH and LD pupils, only a slight advantage existed for a resource room setting. However, this conclusion is based on only three studies.

Recommendations and Implications:

The results of the effectiveness studies did not reveal enough consistent and unambiguous differences to permit definite conclusions. Therefore it is recommended that:

- the existing Type B (for teaching the moderately handicapped) Special Education Teacher Position Grant be retained and the funds continue to support present use at the option of school systems.
- However, sufficient evidence exists to support the recommendation that these type B grants be permitted, at the option of school systems, to be used to employ special class teachers, perhaps full-time, as a resource to regular classroom teachers. It is recommended that this option be subject to the conditions contained in the report.

Implication -- In order to exercise this option, local school systems would need to deploy special teachers as school-based personnel, serving as a resource to regular teachers, rather than to special segregated classes as is the dominant current practice.

Feasibility -- A review of relevant literature indicated that this shift in role was feasible and necessary. The results of follow-up studies underlined the importance of providing assistance to regular class teachers.

PART III: WHAT ARE THE PERCEPTIONS OF ALBERTA SPECIAL CLASS TEACHERS AND THEIR ADMINISTRATORS OF THEIR ROLES AS A RESOURCE TO REGULAR CLASS TEACHERS?

A sample of special class teachers and their administrators were interviewed and asked to respond to the following questions:

1. How willing is the special class teacher to provide resource services to regular teachers?
— Average response near "willing" (4 on a 5-point scale).

2. What is the perceived willingness of regular class teachers to receive this service?
— Average response between "sometimes willing" and "willing" (about 3.5 on a 5-point scale).

3. How frequent is the service?
— Both groups perceived the service to regular teachers as occurring between "infrequently" and "sometimes" (near 2.5 on a 5-point scale).

4. How adequate is the existing service?
— "Sometimes adequate, sometimes inadequate" was the mean response (mid-way on the 5-point scale).

The responses to open-ended questions in the interview revealed general agreement to a change in role emphasis for special class teachers.

Recommendations:

It is recommended that school systems, in consultation with Alberta Education:

- develop guidelines, job descriptions and role expectations for resource teachers;
- provide orientation to teachers and administrators;
- implement the necessary inservice programs; and
- that Alberta Education recommend to Alberta university faculties of education that consideration be given to including this support role for special education teachers in preservice programs.

PART IV: WHAT ARE THE SOURCES, FREQUENCY AND ADEQUACY OF PROFESSIONAL SUPPORT SERVICES USED BY SPECIAL EDUCATION TEACHERS AND THEIR ADMINISTRATORS?

Both special class teachers and their administrators similarly rated the adequacy of auxiliary specialist support services. The order of perceived assistance (highest to lowest) was from: school system personnel, health workers (public health nurses rated high), psychologists (excluding those from the Learning Assistance Centre and Learning Assistance Field Service), speech therapists, social workers and psychiatrists.

PART V: IN WHAT WAYS DO SYSTEM AND NATURE OF ADMINISTRATIVE STRUCTURES AFFECT PROVISIONS OF SPECIAL EDUCATION SERVICES?

Special class teachers saw the teacher as making the greatest number of decisions regarding the placement of special education students. Administrators and consultants were seen as next influential, with parents being least influential.

Approximately 80% of the special class teachers felt that their present arrangements for transferring students to or from special classes were "adequate" or "very adequate". Open-ended comments supported the adequacy ratings and also suggested greater involvement by both educators and parents.

A review of American literature on the size and nature of administrative structures for providing special education on a regional inter-district, shared-services basis led to the following conclusions:

- some school jurisdictions, because of limitations in size, cannot easily provide the kind and range of specialized service they would like;
- regional shared-services arrangements represent a viable alternative to an independent operation;
- guidelines for organizing and implementing shared services are available from the literature and the Alberta experience;
- the formation and continued operation of regional shared-services is dependent upon some government promotion and continuing support.

HOW TO OBTAIN COPIES OF THE CONDENSED REPORT (50 pages) AND COMPLETE REPORT OF THE **ALBERTA SPECIAL EDUCATION STUDY**

The complete report may be borrowed from the Planning and Research Branch and Regional Offices of Alberta Education, University libraries or purchased from the ERIC Document Service.

Single copies of the 50-page Condensed Report may be obtained from:

Planning and Research Branch, Alberta Education
Executive Building, 10105 - 109 Street
Edmonton, Alberta, Canada
T5J 2V2 Telephone: 427-2991

THE ALBERTA SPECIAL EDUCATION STUDY
ACKNOWLEDGEMENTS

Without the assistance of many individuals this study would not have been successfully completed. Special education teachers and their administrators who provided a large amount of data in the interviews are particularly thanked as are the superintendents who were asked for additional information. We hope they and their colleagues will profit from the findings.

Part 1 of the study, after data collection, was undertaken by Dr. Cec Brown of the firm of Arctic Mackenzie Consultants Limited. He and Dr. Peggy Brown of the same firm contributed to other sections of the report. Their analytical skills and attention to detail enhanced the quality of the report in many ways and provided a necessary verification of the findings.

A large number of personnel from Alberta Education were involved in gathering interview data and articles from the literature. Interviews were very ably conducted by the following special education consultants and supervisors: Dale Bellin, Harvey Finnestad, Bernard Fossen, Marg Hatch, Ed Lau, Bill Lockhart, Ken McKie, Henry Minto, Jean Moore and Ken Shields. Mr. Shields was employed for an extended period in the extensive reviews of the research literature which form the basis for several sections of the report. In this he was ably assisted by Cathy Perry and her colleagues from our library. This group left no stone unturned in the attempts to find relevant information from other studies. Marlene Cust, a graduate student in special education, contributed to one portion of the reviews. Another graduate student, Nancy Wood, performed yeoman service in final editing tasks. Advice and assistance provided by Mary Layman and Janice Colter of the Communications Branch are also acknowledged.

The support staff from the Planning and Research Branch cheerfully and expertly attended to many tasks associated with the study. Among those involved were Lynn Sereda, Bonnie Sawchuk and Sandy Forest. Deiter Fehlberg and colleagues from the Data Processing and Student Evaluation Branch provided service of high quality in the analysis of the interview responses.

The steering committee established to provide guidance to the study consisted of Dr. Mel Fenske (Chairman), Dr. Jack Church, Mr. Ken McKie and Mr. Chris Underwood. Their assistance and advice represented a substantial contribution at crucial stages in the investigation.

Finally, acknowledgements and thanks are extended to colleagues in the Planning and Research Branch of Alberta Education who occasionally assumed extra work or were inconvenienced as a result of the priority assigned to this report. Dr. W. R. Duke, Director of the Branch, intervened at several points to provide additional resources when these were required.

H. C. Rhodes
Summer, 1977

TABLE OF CONTENTS

PAGE

List of Tables viii

List of Figures xvi

PART

Background and Overview 1

I An Input-Output Analysis of the Relationship of Selected Variables to the Distribution of Level of Special Education Services throughout Alberta 3

Introduction 4

Related Literature 5

Procedure 12

Results and Discussion 18

Concluding Discussion 31

Summary and Conclusions 33

Recommendations 36

II Literature Review and the Central Alberta Study Concerning Resource Rooms and Other Settings for Remediation 38

Efficacy Studies of the Relative merits of Resource Rooms, Segregated Special Classes and Regular Classrooms in Achieving the Objectives of Remedial Instruction 39

Review of Empirical Research on Academic Achievement in Various Instructional Settings 41

Conclusions 56

The Central Alberta Study: A Comparison of Regular Classrooms and Resource Rooms as Settings for Remediation of Academic Skills 62

III On-Site Interviews of Special Education Teachers and Their Administrators: Support Services to Regular Class Teachers 65

Respondents 66

Special Class Teachers' Role as a Resource to other Teachers 68

Results 69

Summary 80

Recommendations - Parts II, III 83

Literature Review 88

PART PAGE

Follow-up Studies 89

Changing Roles and Expectations under an Integration Model for Special Education 91

Preparation of Consulting Teachers 94

Gaining and Maintaining the Cooperation of the Regular Teacher 95

Training the Regular Teacher 97

Enlisting Administrator Support 99

Conclusions 100

IV On-Site Interviews of Special Education Teachers and Their Administrators: Support Services to Special Class Teachers 101

Support Services to Special Class Teachers as Perceived by Special Class Teachers and Their Administrators 102

Source, Type, Frequency, and Adequacy of Professional Support Services 102

The Selection of Appropriate Professional Support Staff 111

Materials and Equipment 113

Organization of Classes and Teaching Procedures reported by Special Education Teachers 114

Organization for Instruction 115

Teaching and Learning in the Special Classroom 119

Proportion Served, Adequacy, and Congruency of Diagnosis, Planning, Teaching, and Follow-up 120

V Administration and Governance 125

Literature Review 126

Size and Nature of Administrative Structures for Special Education 126

The Alberta Scene 129

Conclusions 131

On-Site Interviews of Special Education Teachers Regarding Transfer of Pupils to and from Special Programs 132

Present Arrangements for Transfer of Pupils 133

PAGE

Bibliographies 136

Bibliography for Part I 137

Bibliography for Background and Part II 139

Bibliography for Part III 145

Bibliography for Part V 148

Appendices 149

Appendix A - Glossary 150

Appendix B - The Sample 152

Jurisdictions in the Study 153

Survey Form of Numbers of Handicapped Children of School Age 155

Appendix C - Master Correlation Matrix for the Alberta Replication of the 1972-73 Rawlyk Study 156

Appendix D - Characteristics of Respondents 161

Appendix E - Special Class Teachers' Willingness to Provide Assistance 164

Appendix F - Special Class Teachers' Perceptions of other Teachers' Willingness to Receive Service 167

Appendix G - Frequency of Special Class Teachers' Assistance to other Teachers 170

Appendix H - Adequacy of Special Class Teachers' Assistance to other Teachers 173

Appendix I - Administrators' Perceptions of the Special Class Teachers' Role in Assisting other Teachers 187

Appendix J - Open-Ended Comments by Special Education Teachers and Their Administrators 190

Appendix K - Overall Adequacy of Specialist Support Services as Perceived by Special Education Teachers and Their Administrators 202

Appendix L - Materials and Equipment found Useful by Special Class Teachers 210

Appendix M - Adequacy of Present Arrangements for Transfer of Pupils in or Out of Special Classes 220

Appendix N - The Interview Forms Used for the On-Site Surveys of Special Education Teachers and Their Administrators 227

LIST OF TABLES

TABLE		PAGE
1	Variables Examined for Contribution to Extent and Mode of Special Education Service Delivery to Grades 1-9 in Saskatchewan 1972-73 (Rawlyk, 1974)	8
2	General Criterion Predictor and Control Variables	13
3	Numbers of Handicapped Children Over All Reporting Districts in Various Service Categories	19
4	Means and Standard Deviations for Continuous Predictors . .	21
5	Means and Standard Deviations of Criterion Variables . . .	22
6	Means and Standard Deviations of Criterion Variables (V5, V22) by Leadership in Special Education (V17)	23
7	Means and Standard Deviations of Criterion Variables (V5, V22) by Geographic Zones (V23 - V32)	24
8	Means and Standard Deviations of Criterion Variables (V5, V22) by Rural/Urban Status (V33,V34)	24
9	Means and Standard Deviations of Criterion Variables (V5, V22) by Public/Separate Status (V35, V36)	25
10	Means and Standard Deviations of Criterion Variables (V5, V22) by Jurisdiction Size (V37, V38, V39)	25
11	Mean Difference of Criterion Variables (V5, V22) by Jurisdiction Size (V37, V38, V39)	26
12	Multiple Regression Analysis Summary for Criterion V5 - Proportion of the Grade 1-9 Population Receiving Special Education Services Under the SETP Grants, in EOF Compensatory and Remedial Project Classes, and in Regular Classes (Supported by LDF Grants)	29
13	Multiple Regression Analysis Summary for Criterion V22 - Proportion of the Grade 1-9 Population in SETP Funded Special Classes or Resource Rooms	30
14	Classroom Groupings for Educable Mentally Handicapped Pupils: Comparison of Results in Reading	43
15	Classroom Groupings for Educable Mentally Handicapped (EMH) Pupils: Comparisons of Results in Several Aspects of Reading	44
16	Classroom Groupings for Educable Mentally Handicapped (EMH) Pupils: Comparisons of Results in Spelling	45

TABLE		PAGE
17	Classroom Groupings for Educable Mentally Handicapped (EMH) Pupils: Comparisons of Results in Arithmetic	46
18	Classroom Groupings for Learning Disabled Pupils: Comparisons of Results in Academic Areas	47
19	Classroom Groupings for Non-Categorical Pupils: Comparison of Results in Academic Areas	48
20	Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons of Results in General Intellectual Functioning	49
21	Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons in Self-Concept, Motivation and Personal Adjustment	50
22	Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons of Results in Social Development	51
23	Segregated vs Regular Class Groupings for Educable Mentally Handicapped Pupils: Comparisons in Attitude Toward School or Teachers	52
24	Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons of Results in Acceptance by Peers	53
25	Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons of Results in Behavior	54
26	Classroom Groupings for Learning Disabled Pupils: Comparisons of Results in Affective Areas	55
27	Average Improvement in Rates of Progress and Proportion of Students Benefiting from First Year of Remediation: Resource Room and Regular Class Organization Compared	64
28	The Teacher Group: Teaching Experience	66
29	The Teacher Group: Number of Courses in Special Education	67
30	Willingness to Provide Assistance According to Service Area	69
31	Willingness to Provide Assistance According to Teaching Position	70
32	Willingness to Provide Assistance According to Total Teaching Experience	70
33	Special Class Teachers' Perceptions of other Teachers' Willingness to Receive Service: Comparisons of Means (Averages) According to Teaching Position	71

TABLE		PAGE
34	Frequency of Assistance According to Service Area	72
35	Frequency of Assistance According to Teaching Position	72
36	Frequency of Assistance According to Source of Support for Diagnosis	73
37	Frequency of Assistance According to Special Education Teaching Experience	73
38	Adequacy of Assistance According to Teaching Position	74
39	Adequacy of Assistance According to Special Education Teaching Experience	74
40	Adequacy of Diagnosis According to Special Education Teaching Experience	75
41	Adequacy in Program Planning According to Special Education Teaching Experience	76
42	Special Class Teachers' Perceptions of Their Role As Resource Workers According to Perceptions About Their Administrators	77
43	Administrators' Perceptions of Special Class Teachers' Role According to Urban-Rural-Project Status	78
44	Comparison of Special Teachers' and Administrators' Perceptions of Special Teachers' Role	79
45	Summary Indicating Statistically Significant and Nonsignificant Differences Between Groups of Special Teachers: Comparison by Aspects of Service to Other Teachers	82
46	Descriptive Statistics for Type, Frequency and Adequacy of Support Services as Perceived by Special Class Teachers who Report Actually Receiving Service	103
47	Adequacy of Specialist Support Services as Perceived by the Special Class Teacher	106
48	Descriptive Statistics for Type, Frequency and Adequacy of Support Services as Perceived by Administrators who Report Actually Receiving Service	107
49	Adequacy of Specialist Support Services as Perceived by the Administrators	111
50	Materials and Equipment Rated Useful or Very Useful	113
51	Average Length of Remediation Periods and Group Sizes Reported by Special Class Teachers	115

TABLE		PAGE
52	Number and Length of Consultation Contacts with Other Teachers and Total Contact Minutes Per Week: Averages Reported by Special Class Teachers	116
53	Average Consulting Minutes Per Week to Other Teachers by Full-Time Resource Room Teachers and Perceptions of Administrator Facilitation	117
54	Special Class Teachers' Perceptions of Percent Utilization and Efficacy of Pedagogical Practices Employed	117
55	Special Class Teachers' Perceptions of Proportion of Students Served and Adequacy of Diagnostic Services by Self and Others - According to Disability Area	120
56	Special Class Teachers' Perceptions of Proportion of Students Served and Adequacy of Program Planning by Self and Others - According to Disability Area	121
57	Special Class Teachers' Perceptions of Congruency of the Program Planning with Diagnosis by Self and Others - According to Disability Area	122
58	Special Class Teachers' Perceptions of Self - Adequacy in Teaching and Congruency of Teaching with the Program Plan - According to Disability Area	123
59	Special Class Teachers' Perceptions of Pupil Progress Follow-Up by Self (To Other Classrooms) and Others - Proportion of Students Followed-Up, Adequacy, Congruency with Plan	124
60	Transfer In of Pupils or Placement in Special Classrooms: Special Class Teachers' Perceptions of Relative Involvement of Teachers, Administrators/ Consultants: Comparisons by Rural/Urban and Project Status	134
61	Transfer In of Pupils or Placement in Special Classrooms: Special Class Teachers' Perceptions of Relative Involvement of Teachers, Administrators/Consultants: Comparisons by Teaching Position	135
62	Master Correlation Matrix for the Alberta Replication of the 1972-73 Rawlyk Study	157
63	The Teacher Group: Frequencies According to Source of Support Services	162
64	Characteristics and Origin of Students Represented in the Classes of Teachers Interviewed	162
65	Description of Sample of Administrators According to Rural-Urban-Project Status and Zone	163

TABLE		PAGE
66	Description of Sample of Administrators According to Source of Diagnosis	163
67	Analysis of Variance of Special Teachers' Willingness to Provide Assistance to Others: Comparisons by Zone	165
68	Special Class Teachers' Perceptions of Their Willingness to Perform as Resource Worker with Other Teachers: Comparisons of Means (Averages) by Rural-Urban-Project Status	165
69	Analysis of Variance of Special Class Teachers' Willingness to Provide Assistance to Others: Comparisons According to University Courses Completed in Special Education and Related Subjects	166
70	Special Class Teachers' Perceptions of Their Willingness to Assist Others: Comparisons by University Preparation	166
71	Special Class Teachers' Perceptions of Other Teachers' Willingness to Receive Service: Comparisons by Service Area (N=138)	168
72	Special Class Teachers' Perceptions of Other Teachers' Willingness to Receive Service: Comparisons of Means (Averages) by Rural, Urban and Project Status	169
73	Special Class Teachers' Perceptions of Other Teachers' Willingness to Receive Service: Comparisons of Means (Averages) According to Total Teaching Experience	169
74	Analysis of Variance of Special Teachers' Perceptions of Frequency of Their Service of Others: Comparisons by Zones	171
75	Special Class Teachers' Perceptions of the Frequency of Their Assistance to Other Teachers: Comparisons of Mean (Averages) by Rural, Urban and Project Status	171
76	Special Class Teachers' Perceptions of the Frequency with which They assist Others: According to University Preparation	172
77	Analysis of Variance of Special Class Teachers' Perceptions of Frequency of Their Assistance to Others: Comparisons According to University Courses Completed in Special Education and Related Subjects	172
78	Special Class Teachers' Perceptions of the Frequency with which They Assist Others: According to Teaching Experience	172
79	Special Class Teachers' Perceptions of Their Adequacy in Providing Service to Other Teachers: Comparisons by Rural, Urban and Project Status	174

TABLE		PAGE
80	Special Class Teachers' Perceptions of the Adequacy of Their Service to Other Teachers: Comparisons by Service Area (N=138)	175
81	Special Class Teachers' Perceptions of Their Adequacy in Providing Service to Other Teachers: According to University Preparation	176
82	Special Class Teachers' Perceptions of Their Adequacy in Providing Service to Other Teachers: According to Source of Diagnostic Support	176
83	Special Class Teachers' Perceptions of Their Adequacy in Providing Service to Other Teachers: According to Teaching Experience	176
84	Analysis of Variance of Special Class Teachers' Self Adequacy Perceptions (Diagnosis): Comparisons by Zones	177
85	Special Class Teachers' Perceptions of Their Own Adequacy in Diagnosis: Comparisons Between Groups Designated as Rural, Urban and Project	177
86	Special Class Teachers' Perceptions of Their Own Adequacy in Diagnosis: Comparisons of Groups According to University Preparation	178
87	Analysis of Variance of Special Class Teachers' Perceptions of Self-Adequacy (Diagnosis): Comparisons by University Courses Completed in Special Education and Related Subjects	178
88	Special Class Teachers' Perceptions of Their Own Adequacy in Diagnosis: Comparisons According to Teaching Position	179
89	Special Class Teachers' Perceptions of Their Own Adequacy in Diagnosis: Comparisons of Groups According to Teaching Experience	179
90	Special Class Teachers' Perceptions of Their Own Adequacy in Diagnosis: Comparisons of Groups According to Source of Support for Diagnosis	179
91	Analysis of Variance of Special Class Teachers' Self-Adequacy Perceptions (Program Planning): Comparisons by Zones	180
92	Special Class Teachers' Perceptions of Their Own Adequacy in Planning Remedial Programs: Comparisons Between Groups Designated as Rural, Urban and Project	180
93	Special Class Teachers' Perceptions of Self-Adequacy in Planning Remedial Programs: Comparisons According to University Courses in Special Education and Related Subjects	181

TABLE		PAGE
94	Analysis of Variance of Special Class Teachers' Perceptions of Self-Adequacy (Program Planning): Comparisons According to University Preparation in Special Education and Related Subjects	181
95	Special Class Teachers' Perceptions of Self-Adequacy in Planning Remedial Programs: Comparisons According to Teaching Position	182
96	Special Class Teachers' Perceptions of Self-Adequacy in Planning Remedial Programs: Comparisons According to Teaching Experience	182
97	Special Class Teachers' Perceptions of Self-Adequacy in Planning Remedial Programs: Comparisons According to Source of Support for Diagnosis	182
98	Analysis of Variance of Special Teachers' Perception of Their Own Teaching Adequacy: Comparisons by Zones	183
99	Special Class Teachers' Perceptions of Their Adequacy in Teaching Remedial Programs: Comparisons Between Groups Designated as Rural, Urban and Project	183
100	Special Class Teachers' Perceptions of Their Own Teaching Adequacy: According to University Courses in Special Education	184
101	Analysis of Variance of Special Class Teachers' Perceptions of the Adequacy of Their Own Teaching: Comparisons According to University Preparation in Special Education and Related Subjects	184
102	Special Class Teachers' Perceptions of Their Own Teaching Adequacy: According to Teaching Position	184
103	Special Class Teachers' Perceptions of Their Own Teaching Adequacy: Comparisons of Groups by Total Teaching Experience	185
104	Special Class Teachers' Perceptions of Their Own Teaching Adequacy: Comparisons of Groups by Source of Support for Diagnosis	185
105	Special Class Teachers' Perceptions of Their Own Teaching Adequacy: Comparisons of Groups According to Special Education Teaching Experience	185
106	Relationship of University Preparation and Experience of Resource Room Teachers to their Feelings of Adequacy in Assisting Others: Tetrachoric Correlation Coefficients (N=~100)	186

TABLE		PAGE
107	Administrators' Perceptions of Special Class Teachers' Role as Resource Workers with Other Teachers: Comparisons of Means (Averages) by Self-Perceptions as Facilitative or Non-Facilitative	188
108	Administrators' Perceptions of Special Class Teachers' Role as Resource Worker with Other Teachers: Comparisons of Means (Averages) by Source of Diagnostic Service	189
109	Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparison of Mean Ratings According to Position Occupied by Respondents	203
110	Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparison of Mean Ratings According to Source of Support for Diagnostic Service	204
111	Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparison of Mean Ratings According to Teacher Education in Special Education	205
112	Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparisons of Mean Ratings According to Years of Total Teaching Experience	206
113	Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparison of Mean Ratings According to Years of Experience in Special Education	207
114	Adequacy of Support Services Personnel as Perceived by Administrators: Comparison of Mean Ratings According to Zone Clusters	208
115	Adequacy of Support Services Personnel as Perceived by Administrators: Comparison of Mean Ratings According to Location and Source of Diagnosis	209
116	Adequacy of Present Arrangements for Transferring Pupils In and Out of Special Class: Comparisons of Ratings by Special Class Teachers According to Teaching Position	221
117	Adequacy of Present Arrangements for Transferring Pupils In and Out of Special Class: Comparisons of Ratings by Special Class Teachers According to Training Level of Teachers in Special Education	222
118	Adequacy of Present Arrangements for Transferring Pupils In and Out of Special Class: Comparisons of Ratings by Special Class Teachers According to Rural, Urban and Project Status	223
119	Adequacy of Present Arrangements for Transferring Pupils In and Out of Special Class: Comparisons of Ratings by Special Class Teachers According to Total Teaching Experience	224

LIST OF FIGURES

FIGURE		PAGE
1	A comprehensive model of special education service delivery (Dunn, 1973)	7
2	School Units, regions, and urban centres in Saskatchewan (after Rawlyk, 1974)	16
3	School zones in Alberta	17

BACKGROUND AND OVERVIEW TO THE STUDIES CONCERNING ADMINISTRATIVE ARRANGEMENTS AND SUPPORT SERVICES FOR MODERATELY HANDICAPPED PUPILS AND THEIR TEACHERS

One of the ways Alberta Education assists school boards in meeting the needs of handicapped pupils is through the Special Education Teacher Position (SETP) grant. This grant supplements revenues provided within the School Foundation Program Fund Regulations and other grants to finance the operation of special classes and resource rooms. In four years the number of special education teacher positions which have qualified for grants has increased 114 percent (1971-72 - 584, 1975-76 - 1250). This rapid increase has been accompanied by a number of problems. For example, teaching positions have been difficult to fill and sufficient professional support services have not always been available. In addition, the burgeoning in numbers of resource rooms is based on an assumption that it is best to remove the moderately handicapped pupil from the regular class for remedial instruction. One alternative has been to retain pupils in the normal setting and to provide special assistance and materials to the regular teacher. In this vein, Brown (1968) and Sparks and Blackman (1965) have stated that special education arrangements are often based on untested assumptions. McKerracher (1972) has reiterated this in writing that

> (R)ather than stress the proliferation of special class teachers, more emphasis should be placed on equipping regular class teachers with remedial skills and responsibilities to allow them to develop coping strategies within their own classrooms. (ATA Newsletter, 1972, p.8)

The recent expansion of segregated groupings, problems in staffing, and the use of alternative practices in providing remediation in regular classrooms suggested that the time was opportune to take stock.

Accordingly, answers were sought to Research Question #1:

- What are the relative merits of resource rooms, segregated special classes and regular classes in achieving the objectives of remedial instruction?
- What types of students seem best served in each setting?
- What are the implications of the findings for Alberta Education?

The Part II of this executive summary and the full report provide answers to the foregoing. Answers to other questions generated to guide additional aspects of this study are reported in other sections.

The Special Education Teacher Position grant was mentioned above. Two other provincial grants have been used by school systems to support remedial instruction in Alberta. One is the Learning Disabilities Fund (LDF) grant used to employ professionals to assist in diagnosis, program planning and speech therapy. A second type of grant is represented by the Educational Opportunity Fund (EOF) which has often been used to support elementary school remedial instruction projects, particularly resource rooms. Finally, the EOF (Compensatory) grants have been provided to nearly twenty school systems which have met criteria which include low assessment and disadvantagedness.

The combined effect on the amount and distribution of support service to handicapped pupils of the SETP, EOF remedial, EOF compensatory and LDF grants was the subject of a correlational study. A separate analysis examined the amount of service (proportion of grade 1-9 pupils served) and its distribution attributed to the traditional-type funding provided by the SETP grant alone. The correlational studies examined a number of assumptions which are often held with respect to the provision of special education service. Included are the assumptions that the amount of service tends to be lower if the school system is characterized as any or all of the following: small, remote, rural, sparsely settled, low taxation base, lacking in specialized staff and enrolling a higher proportion of registered native children.

Amount of service relative to combined special provincial grants and the SETP grant alone were analyzed in relation to fourteen variables which the literature indicated as relevant. The question framed to guide these input-output analyses asked for the degree of relationship between fourteen predictor variables and proportion of grade 1-9 enrollment receiving remediation assistance at least partly funded by the aforementioned grants. Part I of the executive summary and the full report outline the findings.

Additional questions were formulated to guide other aspects of the special education study. These encompassed the special class teachers' roles as resource personnel to support regular teachers and as diagnosticians, program planners and program implementors (Part III).

Additional support to handicapped pupils and their teachers is provided by professionals employed by Alberta Education and other departments of the provincial government. The kind, frequency and adequacy of these services as well as those provided by school system personnel are reported as perceptions held by special education teachers and their administrators. The judgements of special education teachers were gathered relative to the value of various teaching strategies employed. The findings from this aspect of the study are reported in Part IV of the reports.

Finally, a short section is devoted to regional shared services - administrative arrangements involving two or more school systems and the judgements of special education teachers relative to the appropriateness of procedures for transferring students in and out of remedial groups (Part V).

PART 1

AN INPUT-OUTPUT ANALYSIS OF THE RELATIONSHIP OF SELECTED VARIABLES TO THE DISTRIBUTION OF LEVEL* OF SPECIAL EDUCATION SERVICES THROUGHOUT ALBERTA

Research Question #11
Re: the factors associated with the amount of service provided by Alberta school jurisdictions

What are the relationships between certain predictor variables and amount of service (proportion of students served)? Specifically, the amount of service and these variables: Zone; Rural vs Urban status; Public vs RCS; and Size--small, medium, and large; Sparsity; Assessment/pupil; Level of training of teaching and administrative staff; Remoteness--distances to a university and the nearest diagnostic centre; Staff training in special education and related areas; Proportion of registered native population; Ratios of Designated special education staff and regional mental health staff to grades 1-9 enrollment; and Designation of full-time special education leader.

* LEVEL - in this report the word amount is equivalent in meaning to the word level and, thus, both words are used interchangeably.

INTRODUCTION

Educational services for handicapped children originated largely through the efforts of parent groups and committed professionals in a number of fields (Cruickshank, 1958). These initiating forces resulted in the provision of services for certain groups of handicapped children outside the public education system (Rawlyk, 1974). In Canada, special facilities were created under the departments of health, education, social services or justice; and, special services were provided through hospitals, rehabilitation centers and special schools (Commission on Emotional and Learning Disorders in Children, 1970). Whereas these services became associated with the more severely handicapped child, a large number of less handicapped children existed in the regular school system without services related to their special needs. These children were often tolerated as they began a continuum of failure until both the school and the child were relieved as the legal leaving age was reached.

Within the past decade, there has been an increasing trend toward providing special education services to handicapped children through the regular school system. Although there has been a continuing debate as to how this might be accomplished best, an earlier trend toward the segregated classrooms (e.g. Special Opportunity Classes) has been giving way to the integration of handicapped students into the regular classroom accompanied by the necessary special education services.

Regardless of the particular means of providing special education services in the regular school system, a more fundamental question needs to be asked. To what extent are handicapped children receiving special education services? A study by Rawlyk (1974) found only one-half of the grade 1-9 students in need were receiving any kind of special service during the 1972-73 school year. A more recent report by the Rand Corporation (Kakalik et al, 1974) similarly expressed concern for the "insufficient" supply of needed services. A closely related question follows that is related to level of service. What factors are associated with the level of service provided? According to the literature, one might expect economic, geographic, training and support services to determine the extent of services provided. Rawlyk (1974) also attempted to explore this question through the examination of 15 main and ten control variables. Of particular interest was the finding that many of the variables expected a priori to relate to proportion of pupils served were found to be unrelated. These results have been presented in the following section.

In recent years, the Alberta Education authority has attempted to equalize opportunity for handicapped students to receive appropriate special education services. In particular, grants and specialists have been provided with the goal of providing needed services to the learning handicapped children throughout the province. In 1976, the Planning and Research Branch (Alberta Education) embarked on a study of the delivery of special education services in Alberta and related variables through a replication of the Saskatchewan Study (Rawlyk, 1974). The results of this study are reported herein.

Related Literature

The empirical literature pertaining to the level of special education service delivery is limited. Much of that which has been written is conjectual and based primarily upon a philosophical stance. Rawlyk's (1974) review served to identify variables derived from both sources which appeared to relate to service delivery. A synopsis of that review follows. Rawlyk's (1974) three divisions have been retained - namely, variables related to service provision, administrative arrangement for service provision, and the comprehensive approach to service provision.

Variables Related to Service Provision

Chalfant (1967) reduced 31 variables presumed related to provision of special education to six factors by principle axis factor analysis. An expectancy index which provided a comparative measure of likelihood of Illinois county support of special education programs showed the urban factor accounted for 44% of the variance, education for 13%, socio-economic status for 8%, rural occupation for 6%, financial ability for 5% and population growth for 4%.

Reinforcing these findings, the Weintraub and Abeson (1971) study of special education in Delaware suggested that size, population and economic factors influenced the extent of programming. Also in Delaware, Marshman (1972) concluded that size was one of the most important components in the establishment of services. High socio-economic status appeared to have a depressing effect on program size. Effect of full-time leadership was dependent upon socio-economic status. Assessed valuation per pupil and a relative ability index did not appear to be significantly correlated with special education program size or diversity. Hurder and Hurder's (1973) model suggests that one of the variables is access to services as determined by variables such as geographic proximity.

In a national study McClure and Pence (1970) found differences between independent city and suburban districts with regard to number of children enrolled in special education programs as well as those qualified but not enrolled.

Lewchuk (1973) in Saskatchewan gathered the impressions of key personnel on issues in special education. Urban respondents saw inadequate finances as the chief impediment to adequate provision of services while rural respondents considered it to be distance. Both saw lack of trained regular and special education staff as serious problems.

Administrative Arrangements for Service Provision

As a result of legislation permitting the purchase of services for handicapped children from the private sector at public expense Guarino and Sage (1972) noted the trend in New York to having certain handicapped children served in the private sector. They were unable to provide evidence of use related to demographic or economic factors. Blatt (1972) in commenting on the effects of the legislation recognized the need for developing more workable relationships among all responsible for children with special needs. Zneimer (1973) presented the argument in favor of the legislation that districts which were high users of the purchase option also tended to have higher indices of public service originally.

Henderson (1965) suggested that variables such as trained personnel, adequate financial support, and administrative organization might constitute the condition necessary for provision of services directly through the school districts' own resources. Vergason (1971) and Weatherman (1971) suggest population sparsity or density often determines the manner in which services are offered. Since prevalence of handicapped persons is low, most school districts have been too small to provide the necessary range of services (Fritzwater, 1968; Rossmiller et al, 1970). Finally, Graham (1962) proposed that the real (underlying) roadblock to development of special services is the lack of understanding, acceptance and readiness, and this can only be overcome by leadership to set the pace, coordinate the program and act as both an internal and external interpreter.

The Comprehensive Approach

All studies to 1974 have used service criteria based on specific categorical programs. Marshman (1972) has suggested the inclusion of undifferentiated pupils receiving special education services to allow for more comprehensive measures of service delivery. This is in line with trends in special education toward mainstreaming and non-categorization (Reynolds, 1962, 1971; Lucas, 1971).

A modification of Reynolds' (1962) hierarchical model as it relates to service delivery was proposed by Dunn (1973) (Figure 1). Dunn has suggested that whenever possible special education should be made available through team teaching of regular and special education teachers. However, the literature does not contain studies incorporating regular and special education teacher training as variables of the special education service delivery system. However, Barlow (1971) has pointed out that in the United States only about fifty percent of special educators are certified for their positions. In addition, less than 15 percent annually were updating or upgrading their credentials.

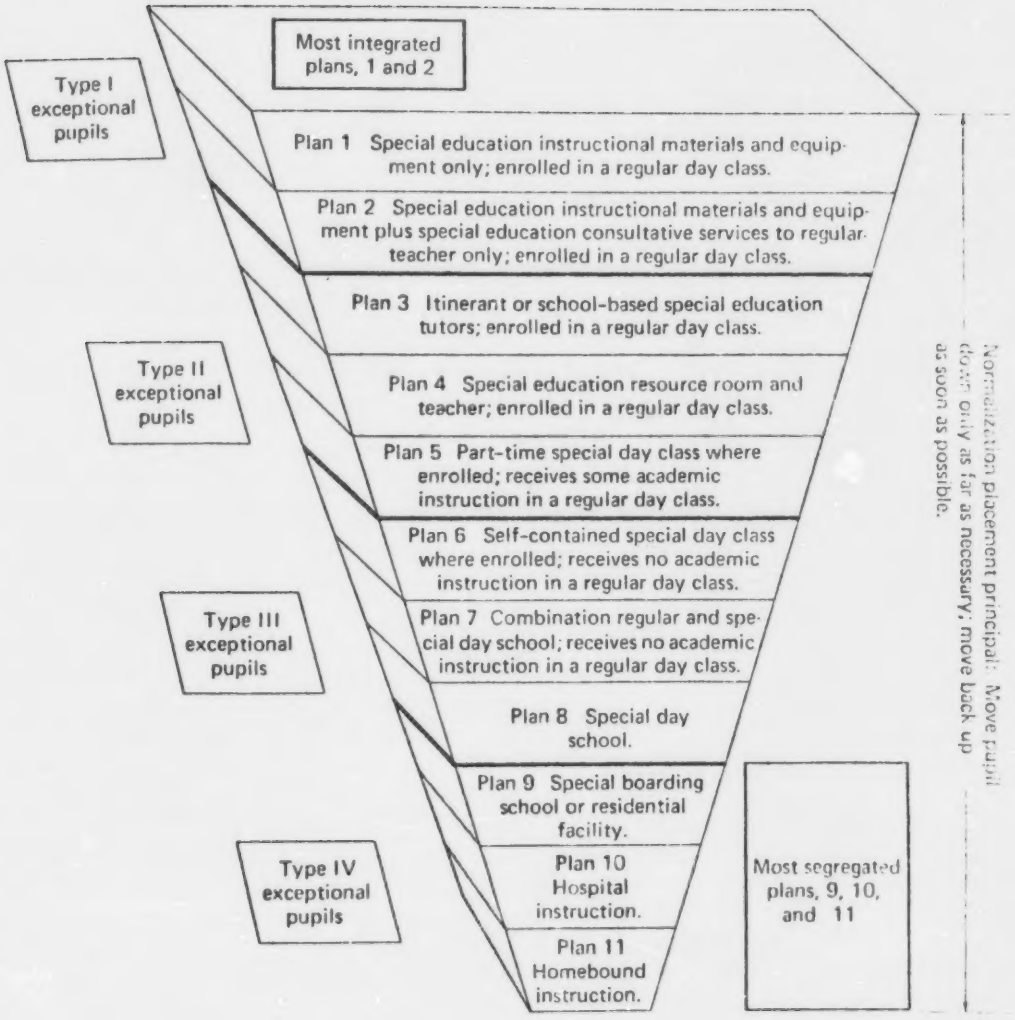
Most integrated plans, 1 and 2
Type I exceptional pupils
Plan 1 Special education instructional materials and equipment only; enrolled in a regular day class.
Plan 2 Special education instructional materials and equipment plus special education consultative services to regular teacher only; enrolled in a regular day class.
Plan 3 Itinerant or school-based special education tutors; enrolled in a regular day class.
Type II exceptional pupils
Plan 4 Special education resource room and teacher; enrolled in a regular day class.
Plan 5 Part-time special day class where enrolled; receives some academic instruction in a regular day class.
Plan 6 Self-contained special day class where enrolled; receives no academic instruction in a regular day class.
Type III exceptional pupils
Plan 7 Combination regular and special day school; receives no academic instruction in a regular day class.
Plan 8 Special day school.
Plan 9 Special boarding school or residential facility.
Type IV exceptional pupils
Plan 10 Hospital instruction.
Plan 11 Homebound instruction.
Most segregated plans, 9, 10, and 11
Normalization placement principal: Move pupil down only as far as necessary; move back up as soon as possible.

Figure 1. A comprehensive model of special education service delivery (Dunn, 1973).

The Rawlyk (1974) Study

During 1971-72, surveys conducted in Saskatchewan (Saskatchewan Department of Education Annual Report, 1973) showed wide discrepancies in both amount and quality of special education services available in school jurisdictions across the province. For example, survey figures suggested that only about one-third of those eligible for services were in fact receiving them despite mandatory legislation. In line with the trends toward accountability and non-categorical approaches to service delivery (see preceding review) Rawlyk (1974) examined the extent to which a number of variables (suggested by the literature) contribute to the delivery of special education services. Table 1 presents the variables examined (predictor variables) and the criterion measures used.

Table 1
Variables Examined for Contribution to Extent and Mode of Special Education Service Delivery to Grades 1-9 in Saskatchewan 1972-73 (Rawlyk, 1974)

Criterion Measures	
V1	Proportion of children receiving direct services from the school district
V2	Proportion of children for whom services are purchased
V3	Proportion of children for whom financial responsibility is relinquished
V4	Proportion of children excluded from services
V5	Proportion of children served (total of V1, V2, and V3)
V6	The difference between the theoretical expectancy figure and the total proportion of children served
Predictors	
V7	District size
V8	Pupil density
V9*	Assessed valuation per child enrolled
V10*	Annual per pupil expenditure
V11	Mean salary of teaching and administrative staff
V12	Mean level of training of teaching and administrative staff
V13	Mean level of training in special education and related areas
V14	Ratio of special education staff to pupil enrollment
V15	Access to staff in other disciplines
V16	Designation of a full-time special education leader
V17	Existence of a formal special education policy statement for the district
V18	Distance to teacher training facilities
V19	Distance to diagnostic services
V20	Proportion of Treaty Indian Population
V21	Mill rate

* based on total district enrollment

Control Variables

V22, V23, V24	Geographic area (north, central, south)
V25, V26	Rural/Urban
V27, V28	Public/Separate
V29, V30, V31	District size (small, medium, large)

The results of the correlational analyses (Pearson and point-biserial) are as follows:

1. the vast majority of special education services were supplied directly by the jurisdication (r=.99)

2. provision of direct services yielded significant correlations with:
   - mean teacher salary (r=0.26)
   - teacher training levels (r=0.27)
   - level of special education training in the general teaching staff (r=0.27)
   - proportion of special education staff to pupil enrollment (r=0.32)
   - presence of a full-time special education leader (r=0.28)
   - central area (r=0.33)
   - mill rate (r=0.24), and
   - small jurisdication size (r=0.22)

3. purchase of services was significantly correlated with:
   - small district category (r=0.25)
   - separate district status (r=0.27)
   - ratio of public health diagnostic staff to district size (r=0.39)
   - per pupil expenditure (r=0.47)
   - general teaching staff training in special education (r=0.23), and
   - public district status (r=0.27)

4. the likelihood of having students excluded from services was significantly correlated with:
   - per pupil assessed valuations (r=0.22)
   - mill rate (r=0.23)
   - distance from the two major cities (r=0.27), and
   - rural status (r=0.25)

5. district size was significantly correlated with:
   - student population density (r=0.65)
   - mean teacher salary (r=0.53)
   - mean number of courses in special education and related fields (r=0.48)
   - mill rate (r=0.37)
   - urban setting (r=0.38)
   - distance to a university campus (r=0.40)
   - distance to a diagnostic service (r=0.25), and
   - mean level of teacher training (r=0.22)

6. teacher training levels were significantly correlated with:
   - salaries (r=0.77), and
   - distance to a university campus (r=0.32)

7. presence of a full-time leader in special education significantly correlated with:
   - proportion of total students served (r=0.29)
   - mean level of teacher training in special education and related areas (r=0.33)
   - mean proportion of special services staff to total student population (r=0.29)
   - higher mill rate (r=0.24), and
   - a negative correlation with small district status

8. geographic location variables yielding significant correlations were:
   - northern area with proportion of Treaty Indian population (r=0.27)
   - central area with provision of direct services (r=0.31),total service provision (r=0.32), and mean level of teacher training (r=0.24)
   - southern area with higher assessed valuation per child (r=0.33) and lower mean levels of teacher training (r=-0.31)

Application of multiple regression analyses showed the best combination of variables (of those included in the study) to predict:

1. whether school district will provide special education services directly for students in their jurisdiction were:
   - a high proportion of special services staff in relation to student enrollment,
   - a high level of teacher training in special education and related areas in the general teaching staff, and
   - a central geographic location in the province.

2. whether a district will purchase services for handicapped children in the jurisdiction were:
   - a high per pupil expenditure
   - a high ratio of public health diagnositic staff to school district population, and
   - the fact that a district is a separate school jurisdiction

3. whether a district will relinquish its responsibility to provide services is district size. (Medium sized districts were less likely to relinquish services than either large or small jurisdictions.)

4. the proportion of children excluded from services were:
   - mean teacher salary, and
   - distance to a university campus (both negatively related)

5. the overall proportion of children served in a jurisdiction, regardless of financial responsibility for services were:
   - level of teacher training in special education and related fields, and
   - central geography

   When geographic location was not considered, the level of teacher training in special education and related fields, and the presence of full-time leadership in special education contributed best to the prediction.

Rawlyk had proposed eight hypotheses. Three of the four hypotheses dealing with the interaction of variables in the prediction equation were accepted (since differences based on size category, geographic location, and tax support were identified on 1 of the 6 criteria). Only one of the four hypotheses concerning the relationship between specific variables and specific modes of services delivery was supported.

In summary, Rawlyk's results do not place as great an importance on district size and population density as was indicated by Chalfant (1967) and Marshman (1972). The finding that a full-time director of special education is a significant independent predictor of service provision does, however, support their earlier findings. The Rawlyk study also suggests the importance of special training of the general teaching staff as well as the specialist staff to the provision of special education services. This last finding is perhaps the main contribution of the Rawlyk study, in that human resources variables had not previously been considered by other researchers who had restricted their studies to economic and demographic variables.

Procedure

The Sample

One hundred and thirty-one school jurisdictions were included in the study (listed in Appendix B). This represented virtually all jurisdictions in the province with the exception of Northland School Division and those under the Department of National Defence. Northland School Division was considered atypical and hence excluded from the study. Information concerning students receiving remedial help in regular classrooms through the LDF funding and handicapped students not in school was obtained directly from the individual jurisdictions on an information form (copy in Appendix B). Other information was obtained from Alberta Education files.

Variables Studied[1]

Variables were selected to be as congruent as possible with those in the Saskatchewan study (Rawlyk, 1974) while remaining within the bounds of relevancy to the Alberta situation. These variables were defined as in Table 2.

A number of differences are to be noted between the Saskatchewan and Alberta studies. Rawlyk (1974) used six criterion variables in her analysis. Three of these related to the proportion of handicapped children served under different delivery modes. Another criterion variable was the total of the preceding proportions). Also examined were the proportion of children excluded from service and a difference proportion between the theoretical expectancy (10 percent) and total proportion served. The Alberta study used two criterion variables: the total proportion of handicapped children receiving special education services (regardless of modality) and the proportion served through the SETP grant scheme. Among the predictor variables, assessed valuation per child enrolled and per pupil expenditure (variables nine and ten) were restricted to the grade 1-9 population in the Alberta study, whereas the Saskatchewan study used total enrollment. The Alberta study did not include information on the existence of a formal special education policy (variable 18). Variable 21 was defined as the supplementary mill rate in Alberta, compared to the total mill rate in Saskatchewan. Control variables relating to geographic zone also differed between the two studies. Rawlyk (1974) used three geographic regions (Figure 2, variables 22 to 24) whereas ten (variables 23 to 32) were examined in the Alberta study (Figure 3).

---

[1]All values were obtained by jurisdiction, therefore mean values represented average of the jurisdiction values.

Table 2

General Criterion Predictor and Control Variables[2]

General and Criterion Variables

V1 Number of students funded by Special Education Teacher Position (SETP) grants.

V2 Number of students in EOF (Educational Opportunity Fund) elementary (remedial) or EOF Compensatory classrooms who received diagnostic and/or program planning services by LDF (Learning Disabilities Fund) funded specialists.

V3 Number of students in regular classrooms on individualized remedial programs who received diagnostic and/or program planning services by LDF funded specialists.

V4 Number of handicapped children of school age who did not attend any school or remedial setting.

V5 First criterion measure - the percent of students (grade 1-9) who received special education services in
- special classes or resource rooms funded by the SETP grant
- EOF remediation project classes, EOF compensatory project classes, or regular classes on individualized remedial programs where diagnostic and/or program planning was provided entirely or in part by LDF funded specialists.

V6 The discrepancy between percent served and the theoretical expectancy (10 percent) of handicapped children in the population.

V22 Second criterion variable - the percent of students served through SETP grants.

Predictor Variables

V7 District size - the grade 1 - 9 enrollment for 1975-76 based on September 30, 1975 enrollment.

V8 Pupil density per square mile - number of grade 1 - 9 pupils divided by square miles in the school jurisdiction.

V9 Assessed valuation per child enrolled (an index of wealth or ability to fund education services) - equalized assessment divided by grade 1-9 enrollment.

[2]All values were obtained by district, therefore mean values represent average of district values.

V10 Per pupil expenditure (an index of willingness to provide educational services) - operational expenditures for calendar year 1975 divided by the September 30, 1975, grade 1 - 9 enrollment (less transportation and debt retirement expenditures).

V11 Mean salary of certificated administrators and teachers (an index of training and experience levels) - total salaries for 1975-76 divided by the number of certificated personnel.

V12 Mean level of training - average years of university teacher education reported by certificated staff on the TR-1 form.

V13 Mean number of course units - average number of units (three or more full year courses comprise one unit) of university special education and related courses taken by certificated staff as reported on the TR-1 form. These units were selected from psychology, reading, remedial reading, educational psychology and special education areas. In course terms, the mean number of course units X3 = the minimum average number of special education and related courses taken by staff.

V14 Ratio of students to FTE equivalent special education staff - grade 1 - 9 enrollment divided by the number of full time equivalent (FTE) teachers designated as special class or resource teachers for SETP grant purposes. (This excludes central office specialists and teachers of EOF remedial or EOF compensatory classes.)

V15 Ratio of students to diagnostic personnel - grade 1 - 9 enrollment divided by the number of psychologists, social workers and speech therapists employed in that region by the Alberta Department of Social Services and Community Health.

V16 Percent native - percent of the grade 1 - 9 enrollment which comprised registered native children. (Excluded are children of native ancestry who are not registered as 'treaty' Indians.)

V17 Leadership in special education - whether or not a full-time leader in special education was designated in the district.

V18 Formal policy for special education - this variable was not used.

V19 Distance to a university - road miles to the nearest university at Lethbridge, Calgary or Edmonton.

V20 Distance to a diagnostic centre - road miles to office locations of LAC, LAFS, or Mental Health Services.

V21 Supplementary mill rate (an index of willingness to provide educational services by increasing local taxes) - the supplementary requisition is a local levy to supplement provincial grant funds.

Control Predictor Variables

V23-32 Zone or geographic region - designated as follows:

V23 Peace River
V24 North Central West (Edmonton non-urban)
V25 North Central East (Edmonton non-urban)
V26 Central
V27 South Central (Calgary non-urban)
V28 Southern (Lethbridge Zone)
V29 Edmonton Public
V30 Edmonton RCS
V31 Calgary RCS
V32 Calgary Public

V33, V34 Rural or urban status (respectively) - rural status for districts with less than 10,000 grade 1 - 9 students, urban status with greater than 10,000 grade 1 - 9 students.

V35, V36 Public or separate status (respectively) - districts designated as public or catholic separate.

V37, V38 V39 District size - small, medium or large respectively designated by grade 1 - 9 enrollments of less than 1,500; 1,500 - 4,000; and greater than 4,000 students.

SCHOOL UNIT MAP

Figure 2. School units, regions, and urban centers in Saskatchewan. (Cities are indicated by black dots.) (after Rawlyk, 1974)

Figure 3: School Zones in Alberta

Statistical Procedure

Comparable statistical procedures were maintained between the Rawlyk (1974) and Alberta Studies. Association relationships were determined by the Pearson product moment, point biserial and phi correlational methods.[3] A forward reaching step-wise multiple regression technique was used to test the relationship between the predictor and criterion variables. Rawlyk (1974) used the procedures presented by Cooley and Lohnes (1971). The present study used a similar technique as presented in Draper and Smith (1966). The multiple regression analyses were applied for criteria V5 and V22 respectively in five sub-operations with different predictor combinations as follows:

1. V7-V17, V19-V22;

2. V7-V17, V19-V22 plus geographic zones (V23-V32);

3. V7-V17, V19-V22 plus rural-urban status (V33, V34);

4. V7-V17, V19-V22 plus public-separate status (V35, V36); and

5. V7-V17, V19-V22 plus small, medium, large district size (V37, V38, V39).

An alpha level of .05 or less was used for significance in all statistical techniques.

Results and Discussions

Descriptive Statistics

Table 3 shows the numbers of grades 1-9 handicapped children receiving special education services under different support sources. Services to more than 20,000 children were provided under the SETP grant scheme in the 1975-76 school year. Six thousand eight hundred sixty-one handicapped children in EOF remedial and compensatory classrooms received diagnostic and/or program planning services provided by specialists at least partly funded by LDF grants. Three thousand seven hundred eight-three handicapped students were in regular classes and on individualized remedial programs where diagnosis and/or program planning was provided by LDF funded specialists. Only 140 handicapped children known to the reporting jurisdictions did not attend any school or remedial setting in 1975-76. Reasons for this were not explored in the present study.

---

[3] It is acknowledged that assumptions pertaining to the distributions underlying the dichotomous variables for the point biserial and phi techniques were not met for some of the dichotomous variables. This was permitted in order to maintain congruence with the Rawlyk (1974) study and compatibility with existing computer programs.

Table 3

Numbers of Handicapped Children Over All Reporting Districts In Various Service Categories

Variable *		Number of Handicapped Children
V1	Funded by SETP grant	20,010
V2	In EOF remedial, EOF compensatory and/or funded through LDF for program planning/diagnosis	6,861
V3	In regular classes on individual remedial programs based on diagnosis/program planning by LDF funded specialists	3,783
V4	Of school age who did not attend any school or remedial setting in 1975-1976	140

*for complete variable description see Procedures section

Table 4 shows the means and standard deviation for the continuous predictors. Some comparisons with the corresponding Saskatchewan values are of interest. The reader is reminded that the Alberta values apply to the 1975-76 school year whereas the Saskatchewan values apply to the 1972-73 school year. Average district (jurisdiction) size in Alberta is larger (2409.9) and more variable (SD=7,178.04) than that reported for Saskatchewan (2029.7 and 267.0 respectively). Pupil density per square mile is less in Alberta (39.2, SD=88.7) than Saskatchewan (59.8, SD=121.3) as is the proportion of registered native children (3.34 percent and 4.0 percent respectively). Miles to a university or a diagnostic centre is greater in Alberta (122.76 miles, SD=104.20 and 84.09 miles, SD=75.76 respectively) than in Saskatchewan (93.8 miles, SD=50.9 and 33.3 miles, SD=26.6 respectively).

Other values in Table 4 do not warrant comparison between the two provinces because of the different school years considered and differing variable definitions. In Alberta, assessed valuation per child was $11,363.97 (SD=6,755.25) derived from equalized assessment divided by grade 1-9 enrollment. Per pupil expenditure less transportation and debt retirement costs was $859.81 (SD=128.21). Mean salary of certificated staff was $14,405 (SD=1,361.73). These staff averaged 3.73 (SD=.38) years of university teacher education which included an average of .85 (SD=.45) course units related to special education. The .85 course units represent a minimum average of 2.55 related courses. The ratio of grade 1-9 students to special education staff was found to be 318.39 (SD=217.82) and the ratio of grade 1-9 students to diagnostic specialists was found to be 1,763.52 (SD=566.36). An average supplementary mill rate of 19.70 was applied to jurisdictions included with a standard deviation of 5.50 mills.

A generally accepted figure for students in need of special education services is 10 percent of the student enrollment (Council for Exceptional Children, 1971). This excludes gifted children. This figure has been used as a benchmark against which the level of services to the learning handicapped child has been judged. According to the Saskatchewan Department of Education Annual Report for the 1971-72 school year, only about one-third of children in need of special education services actually received services (as reported by Rawlyk, 1974). This occurred despite mandatory legislation. For the following school year little improvement was noted by Rawlyk (1974) who reported only 5.0 (SD=.5) percent of the grade 1-9 population being served in special education. This finding has not been unique in the literature where consistently lower levels of service than the theoretical 10 percent in need of service are reported. This situation was not found in the Alberta study. Table 5 shows the means and standard deviations for the criterion variables. Handicapped children receiving special education services through all sources of special funding comprise 12.95 percent of the grades 1-9 population. However, a large standard deviation (14.78) indicates considerable variability in the level of service. This variability is partly explained

Table 4

Means and Standard Deviations for Continuous Predictors*

Variable**		Mean	Standard Deviation
V7	District size	2,409.98	7,178.04
V8	Pupil density/sq. mile	39.26	88.41
V9	Assessed valuation/child	$11,363.97	6,755.25
V10	Per pupil expenditure	$859.81	128.21
V11	Mean salary of staff	$14,405.55	1,361.73
V12	Mean years of training	3.73	.38
V13	Related course units	.85	.45
V14	Students/SE staff	318.39	217.82
V15	Students/diagnostic specialists	1,763.52	566.36
V16	Percent native (treaty)	3.34	8.90
V19	Miles to university	122.76	104.20
V20	Miles to diagnostic centre	84.09	75.76
V21	Supplementary mill rate	19.70	5.50

* all means were derived from district means
** for complete variable description see Procedures section

Table 5

Means and Standard Deviations of Criterion Variables

Variable**		Mean*	Standard Deviation
V5	Percent of students receiving special education service	12.95	14.78
V6	V5 minus 10% (theoretical expectancy)	-3.33	14.46
V22	Percent of students in special classes or resource rooms under SETP grants	6.51	4.70

* all means were derived from district means
** for complete variable description see Procedures section

by a negative skew in the distribution caused by a number of jurisdictions in disadvantaged areas having an unusually high rate of special education service.[4] Of credit to the Alberta Education system of supporting special education service, level of special education service to learning handicapped students exceeds the theoretical expectancy for those in need of those services. A significant part of this service is provided through the SETP grants where an average of 6.51 (average of school system means) (SD=4.70) percent of the grade 1-9 enrollment is served. A caution is indicated in interpreting these results. Although the level of service provided is impressive, this represents a measure of the amount of service and does not provide information on the quality of the services. Determining the quality of the service is complex and is beyond the scope of the present study. However, it is to be noted that amount of service is a necessary but insufficient index of the provision of special education services. In future studies, attention may be directed to service quality after the level of service is adequately established. It would appear that Alberta may appropriately begin to turn attention to the appraisal of quality in these services.

Other descriptive statistics of interest come from variable 17 and the so-called control predictor variables. Variable 17 related to whether or not full-time leadership in special education was reported within the jurisdictions. Of the 131 jurisdictions, only 27 had a designated full-time leader in special education. According to size, 85 jurisdictions

[4] This uneven distribution was the direct result of the EOF compensatory source.

were designated as small (less than 1500 students in grades 1-9), 37 were designated as medium (1500 - 4000 students) and 9 were designated as large (greater than 4000 students). Using the criterion of less than or greater than 10,000 grade 1-9 students, 127 jurisdictions were rural and 4 were urban. Public and Catholic separate jurisdictions accounted for 82 and 49 of those included in the study.

Comparisons Between Dichotomous Variables

A number of comparisons were examined between the dichotomous variables and the criterion variable. Table 6 shows the criterion variables according to leadership in special education.

Table 6

Means and Standard Deviations of Criterion Variables (V5, V22) by Leadership in Special Education (V17)

		V5		V22	
Full-time leader?	N	Mean	SD	Mean	SD
Yes	27	9.69	3.56	7.86	5.33
No	104	13.79	16.46	7.16	4.51
Difference		4.10*		1.70	

*Significant at 0.05 level

Those jurisdictions without full-time leaderships in special education provided a significantly higher level of service than those with full-time leadership. This was contrary to the expectation that full-time leadership would reflect commitment to higher levels of service.[5] Jurisdictions with full-time leadership did provide significantly greater service under the SETP grant scheme.

Table 7 compares geographic zone and the criterion variables. The reader is directed to the Variables Studied section for a definition of the zones. No significance tests were performed on the zone/criteria data.

[5]This finding is based on whether or not a jurisdiction had a designated full-time leader in special education. It appears that jurisdictions accessing the EOF compensatory funds appointed coordinators of the EOF funds who served a similar function to the full-time leader in special education. This information was not requested, but may account for this finding.

Table 7

Means and Standard Deviations of Criterion Variables (V5, V22) by Geographic Zones (V23-V32)

Zone Code	Zone No.	N*	V5 Mean	V5 SD	V22 Mean	V22 SD
V23	1	23	26.81	29.54	4.53	4.12
V24	2	24	11.28	6.68	8.63	5.12
V25	3	22	10.24	3.87	7.65	5.94
V26	4	20	10.81	6.87	6.63	3.94
V27	5	14	8.84	6.97	5.08	3.39
V28	6	24	8.80	6.73	5.92	4.45
V29	7	1	8.95	-	8.40	-
V30	8	1	11.70	-	9.50	-
V31	9	1	6.70	-	5.50	-
V32	10	1	4.50	-	4.30	-

* jurisdictions per zone

A comparison between criterion variables and rural/urban designation is presented in Table 8. Rural jurisdictions provided a greater overall level of service than the urban jurisdictions. No difference between the rural and urban jurisdictions were found for percent served with the SETP grants.

Table 8

Means and Standard Deviations of Criterion Variables (V5, V22) by Rural/Urban Status (V33, V34)

Status	n	V5 Mean	V5 SD	V22 Mean	V22 SD
Rural	127	13.10	15.03	6.50	4.78
Urban	4	7.98	3.08	6.92	2.43
Difference		5.12*		0.42	

*Significant at 0.05 level

In Table 9 Catholic separate jurisdictions are seen to provide a significantly greater level of special education services than those in the public sector. No difference was found between these systems for percent of students served through the SETP grants.

Table 9

Means and Standard Deviations of Criterion Variables (V5, V22) by Public/Separate Status (V35, V36)

		V5		V22	
Status	N	Mean	SD	Mean	SD
Public	82	11.04	10.78	6.51	4.53
Separate	49	16.13	19.58	6.50	5.07
Difference		5.09*		0.01	

*Significant at 0.05 level

Tables 10 and 11 examine the criterion variables according to district size. Highest level of services were found with the small and medium jurisdictions. With SETP funded services this is substantially reversed where the highest to lowest rate of service was in the large, medium and small jurisdictions respectively.

Table 10

Means and Standard Deviations of Criterion Variables (V5, V22) by Jurisdiction Size (V37, V38, V39)

		V5		V22	
Size	N	Mean	SD	Mean	SD
Small	85	13.34	15.72	6.32	4.63
Medium	37	12.92	14.56	3.43	11.79
Large	9	9.29	3.18	9.2	8.67

Table 11

Mean Differences of Criterion Variables
(V5, V22) by Jurisdiction Size
(V37, V38, V39)

	V5				V22		
	S	M	L		S	M	L
S	-	0.42	4.05*	S	-	2.89*	2.88
M		-	3.63*	M		-	5.77*
L			-	L			-

*Significant at 0.05 level

In each consideration of the total service criterion (V5) by jurisdiction classification, those traditionally considered at disadvantage for providing special education services have consistently showed greater service. This has occurred with jurisdictions designated as small /medium, rural and separate. In addition, those without designated full-time leadership have shown greater level of service through the special funding arrangements. The large, urban and public jurisdictions have typically been seen as better able to provide services and indeed may offer a higher level of service than is apparent here by supplementing the special funding out of their regular budgets. These findings support the contention that the special funding arrangements offered by Alberta Education have succeeded in promoting special education services in jurisdictions which otherwise might be beyond their means. In addition, it is apparent that this has not been done at the expense of the more advantaged jurisdictions since these also show a relatively high level of service through the special funding arrangements.

Correlational Findings

The master correlation matrix including all variables is in Appendix C. A correlation of .195 was required for significance at the .05 level. Of particular interest in this study are the relationships between predictor and criterion variables. Total proportion of students served under all special funding arrangements (criterion variable V5) significantly correlated with five predictor variables. Between V5 and assessed valuation per child (V9), a correlation of -0.25 indicates a tendency for service to increase with decreasing valuation per child. Accepting the assessed valuation per child as an index of wealth or ability to fund educational services, the correlation suggests that the special funding arrangements through Alberta Education have successfully compensated for differential ability of the jurisdictions to provide special education services. Criterion V5 also correlated with the proportion of treaty native children (V16,r=.31), distance to a university (V19,r=.38), distance to a diagnostic centre (V20,r=.42) and zone 1 (V23,r=.43). These relationships indicate the tendency for special education service to increase with the percent native children, distance to a university, distance to a diagnostic centre and zone 1. Since these factors are generally considered related to the degree of disadvantage, interpretation is similar to that provided for assessed valuation per child. That is, various measures of disadvantage are associated with increasing special education service through the special funding scheme known as the EOF (Compensatory). Of comparative interest with the Saskatchewan study, Rawlyk (1974) did not find any significant correlation between total proportion receiving special education service and assessed valuation per child, proportion treaty native, distance to a university or distance to a diagnostic centre. She did report a significant relationship between proportion served and the northern geographic zone (r=.24) which is roughly comparable to that found with the Alberta zone 1 (Peace River). However, Rawlyk (1974) also reported a higher correlation between the criterion (V5) and her central geographic zone. Contrary to the Alberta study, Rawlyk (1974) also found significant relationships between proportion served and mean salary of teaching staff (r=.23), mean level of training (r=.25), mean number of related courses per staff member (r=.25) and ratio of designated special education staff to grade 1-9 enrollment (r=.31). The second criterion variable in the Alberta study (V22, proportion served through SETP support alone) correlated significantly with zone 1 (V23, r =.20) and zone 2 (V24, r=.21).

Regression Analyses Findings

As reported in the review of Rawlyk's (1974) study, only two predictor and one control variables significantly contributed to the prediction of total proportion of grade 1-9 students served by special education in Saskatchewan. The best predictor combination was level of teacher training in special education and related fields[6], and central geography. When geographic location was not considered, the level of teacher training in special education and related fields, and the presence of full-time leadership in special education were the best set of predictors. The Alberta study found a different set of predictors. Table 12 is a summary of the regression analyses using the total proportion of the grade 1-9 population receiving special education services (V5) under the special funding arrangements as the criterion variable. Sub-operation 1, 3, 4, and 5 produced the same predictor set accounting for 30.43 percent of the variance. The contributing predictors are (in order of contribution); distance to a diagnostic centre, percent native, distance to a university and assessed valuation per child enrolled. As reported in the preceding section these predictors correlated .42, .31, .38, and -0.25 respectively with the criterion. Collectively, the predictors correlated .55 with the criterion. These findings confirm the interpretation offered in the preceding section. That is, level of special education service increases with increasing distance to a diagnostic centre, increasing proportion of native children, increasing distance to a university and decreasing assessment per pupil enrolled. In sub-operation 2, with the inclusion of geographic zones, significant predictors were zone 1 (Peace River), distance to a diagnostic centre, distance to a university and proportion native children. These predictors correlated .43, .42, .38 and .31 respectively with the criterion. The combined predictor set correlated .69 with the criterion. The appearance of zone 1 in sub-operation 2 was not unexpected. Zone 1 has accessed the EOF compensatory funds more than any other zone because of qualifying through low assessment per pupil and the ability to establish that the students are disadvantaged. This has resulted in a mean level of service of 26.81% of the grade 1-9 enrollment (V5) for zone 1 compared to a range of 6.76 to 11.70 percent for the other nine zones.

Table 13 summarizes the regression analysis for criterion V22 - proportion of students served through the SETP funds. Sub-operation 2 has identified zone 2 (V24, North Central West) as the only significant predictor reflecting that the North Central West region has been the major beneficiary of the SETP grants. However, the variance accounted for by this variable is small (4.54%) and does not warrant further discussion.

---

[6]Rawlyk (1974) reported these findings on page 54. However, the summary tables for the regression analyses in her Appendix D (pages 97-101) show the ratio of designated special education staff to grade 1-9 enrollment (V14) instead of the level of teacher training in special education and related fields (V13) contributing to the predictor set.

Table 12

Multiple Regression Analysis Summary for Criterion V5 - Proportion of the Grade 1 - 9 Population Receiving Special Education Services Under the SETP Grants, in EOF Compensatory and Remedial Project Classes and in Regular Classes (Supported by LDF Grants)

Sub-Operation	Predictors Entered	Contributing Predictors*	Standard Weights	Accounted Variance**
1	V6-V17, V19-V21	V20	.281	17.64
		V16	.246	24.19
		V19	.185	28.21
		V9	-.157	30.43
2	V6-V17, V19-V21 plus V23-V32 (geographic zones)	V23	.995	18.75
		V20	.734	33.11
		V19	-.810	45.50
		V16	.150	47.57
3	V6-V17, V19-21 plus V33, V34 (rural, urban)	V20	.281	17.64
		V16	.246	24.19
		V19	.185	28.21
		V9	-.157	30.43
4	V6-V17, V19-V21 plus V35, V36 (public, separate)	V20	.281	17.74
		V16	.246	24.19
		V19	.185	28.21
		V9	-.157	30.43
5	V6-V17, V19-V21 plus V37, V38, V39 (district size SML)	V20	.281	17.64
		V16	.246	24.19
		V19	.185	28.21
		V9	-.157	30.43

* in order of contribution **cumulative, in percent

Note: V20 = Distance to a diagnostic centre; V16 = percent registered native
V19 = Distance to a university; V9 - per pupil assessment
V23 = Zone 1 (Peace River Zone in northwestern Alberta)
** Example for interpreting accounted variance. In sub-operation #1, when V20 was entered into the regression equation, 17.64% of the variance in the criterion was accounted for. V16 was entered next and this increased the variance explained to 24.19%; 6.5% (24.19 minus 17.64) was the unique contribution of V16.

Table 13

Multiple Regression Analysis Summary for Criterion V22 - Proportion of the Grade 1 - 9 Population in SETP Funded Special Classes or Resource Rooms

Sub-Operation	Predictors Entered	Contributing Predictors*	Standard Weight	Accounted Variance*
1	V6-V17, V19-V21	None		
2	V6-V17, V19-V21 plus V23-V32 (geographic zones)	V24	.213	4.54
3	V6-V17, V19-V21 plus V33, V34 (rural, urban)	None		
4	V6-V17, V19-V21 plus V35, V36 (public, separate)	None		
5	V6-V17, V19-V21 plus V37, V38, V39 (district size, SML)	None		

* in percent

Concluding Discussion

The Alberta study has identified variables related to special education service delivery which differed from those found in the Saskatchewan study (Rawlyk, 1974) and other related studies. Whereas the Alberta study was based upon an almost identical predictor pool, those related to service delivery were measures generally considered as indicators of advantage/disadvantage for providing special services. Comparable findings in the Saskatchewan study identified predictors related to level of related teacher training, central geography and the presence of full-time leadership in special education. Chalfant's (1967) and Marshman's (1972) studies concurred with the significance of the full-time leadership variable. Rawlyk (1974) reasoned that this reflected the relative importance of a liaison function of the leader with other departments and agencies and in turn facilitated the level of service delivery. Although the leadership variable did not significantly contribute in the regression analyses in the Alberta study, other findings suggest the opposite to be true in this province. Breakdown comparisons between the first criterion variable (V5) and leadership showed a significantly greater level of service where full-time leadership did not exist.[7] Indeed, if it is conjectured that the more advantaged jurisdictions are more likely to support full-time leadership in special education, this becomes a further reflection that special education services in Alberta tend to be greater in the more disadvantaged areas. Interestingly, the only suggestion that this might occur to any extent elsewhere appeared in the Marshman (1972) study which found a depressing effect on services with the increasing socio-economic status. This is comparable with a similar finding in the Alberta study with variable V9 - assessed valuation per child enrolled in grade 1-9.

Further comparisons are warranted with the Chalfant (1967) study. Chalfant (1967) found urban, education, socio-economic status, rural occupations, financial ability and population growth to be significantly related to special education service delivery. The factors which are comparable with those in the Alberta study actually showed an opposite trend.

Hurder and Hurder's (1973) suggestion that geographic proximity facilitated service delivery was also not supported by the Alberta study. Rather, an opposite trend was found. As distance from a university or diagnostic centre increased, level of service increased. The rural jurisdictions also showed a greater level of service than the urban areas. Weintraub and Abeson's (1971) contention that programs tend to be "more highly developed" in densely populated jurisdictions and more limited and haphazard in sparsely populated areas similarly does not apply in Alberta. This, of course, applies when "highly developed" refers only to measures of amount since qualitative measures were not part of the present study.

---

[7] School jurisdictions who accessed the EOF compensatory grant tended to appoint an EOF director or coordinator. Personnel occupying these offices often functioned as special education leaders.

The reasons why the Alberta study produced results at variance with the existing literature have been alluded to in previous sections. A system of grant and personnel support has been implemented in this province through Alberta Education with the intent of equalizing opportunity for handicapped students to receive needed special education services. In recognition that disadvantaged areas have a lesser ability to provide services, a need factor has been built into the accessing of this support. By the results presented in this study, reasonable success has been experienced in raising the mean level of service above the theoretical expectancy for need and reaching the handicapped students in the more disadvantaged area. This does not appear to have been accomplished at the expense of handicapped children in the more advantaged jurisdictions.

The question of mandatory versus permissive legislation arises. There has been some suggestion that mandatory legislation would facilitate the level of service to handicapped students. Rawlyk (1974) selected Saskatchewan for her study because it has implemented mandatory legislation for providing special education services to students in need. Although neither the Alberta nor Saskatchewan studies were able to determine the effect of mandatory legislation in any definitive way - a discussion based on these studies can provide important insights. An explanation of the mandatory system in Saskatchewan is necessary for understanding. As of September, 1971, the Saskatchewan School Act mandated that school districts make available special education services to children who were designated by the District Superintendent as being mentally, physically, socially or emotionally handicapped. This legislation permitting discretion of the superintendent may only be mandatory in principle. Certainly, students in need of special education would tend to be so designated in relation to the availability of supporting funds. When internal funds are committed to other programs this would essentially be linked to the availability of support funds from external sources. External funding arrangements for special education programs in Saskatchewan for the 1972-73 school year were based on a formula of double the normal per pupil grant up to a maximum of 2.5% and those that did exceed it were allowed full funding. In effect, this type of mandatory legislation and grant support predisposes a relatively low level of special education services. This is confirmed in Rawlyk's finding that only 5.0 percent of the grade 1-9 population were actually receiving special education services - far short of the 10 percent theoretical of those in need. The Alberta situation presents a different picture. Alberta does not have mandatory legislation regarding the provision of special education services, but does have a more comprehensive and flexible support system through Alberta Education. Under this system, almost 13 percent[8] (average by jurisdiction) of the grade 1-9 population receive special services which represents nearly three percent more than the theoretical expectancy. Considering the lack of mandatory legislation in Alberta and the success in providing a high average level of service to handicapped children, there is no reason to expect the situation to improve through the institution of a mandatory requirement.

---

[8]Average of school system proportions. The provincial average, based on grade 1-9 enrollments, is 9.7 percent.

Summary and Conclusions

A study by Rawlyk (1974) during the 1972-73 school year in Saskatchewan examined a number of variables that were expected a priori to relate to the level of special education services provided for handicapped students in grades 1-9. These variables were determined by administrative jurisdiction and included measures of district size, pupil density, economic factors, professional training, specialist availability and public-separate status. Rawlyk (1974) reported only 5 percent[9] of the grade 1-9 population were being serviced in special education compared to the generally accepted theoretical figure of 10 percent in need of special services. Considering this total proportion of students served by district as a criterion, it was found that only the level of teacher training in special education and related subjects, central geography, and the existence of full-time leadership in special education were related. Contrary to common expectations, none of the other variables were useful in predicting the level of service provided.

The Study

Because of the implications of the Rawlyk (1974) findings for special education policy, the Alberta Education Planning and Research Branch in 1976 undertook the replication of the relevant aspects of the Saskatchewan study. One hundred and thirty-one jurisdictions in Alberta were included in the study. This represented nearly all those in the province excluding those under the Northland School Division and the Department of National Defence. Two criteria for service were examined,

1. the percent of students (grades 1-9) who received special education in:
   - special classes or resource rooms funded by the Special Education Teacher Position Grants (SETP), and
   - the Educational Opportunity Fund (EOF) remediation project classes, EOF compensatory project classes, or regular classes on individualized remedial programs where diagnostic and/or program planning was provided entirely or in part by Learning Disabilities Fund (LDF) funded specialists.

2. the percent of students served only through the SETP grants.

Fourteen predictor variables and 17 predictor control variables were examined for their relationship to the criterion variables. These were as follows:

1. Predictor variables
   V7 - district size
   V8 - pupil density per square mile
   V9 - assessed valuation per child enrolled
   V10- per pupil expenditure
   V11- mean salary of professional staff

---

[9] Average of school district means; therefore, not a weighted average which consider the varying enrollments between jurisdictions.

V12 - mean level of professional training
V13 - mean number of related course units
V14 - ratio of students to special education staff
V15 - ratio of students to diagnostic specialists
V16 - percent "treaty" native
V17 - leadership in special education
V19 - distance to a university
V20 - distance to a diagnostic centre
V21 - supplementary mill rate

2. Predictor control variables
V23 to V32 - zone or geographic region
V33, V34 - rural or urban status
V35, V36 - public or separate status
V37, V38, V39 - district size (small, medium, large)

These variables were selected for compatability with the Rawlyk (1974) study.

Findings

It was found that Alberta Education in 1975-76 provided service for 20,010 handicapped children under the SETP grants; 6,861 handicapped children in EOF remedial and EOF compensatory where diagnostic or program planning service were provided by personnel at least partly funded by the LDF grant; and 3,783 handicapped students in regular classes or individualized programs planned by LDF funded specialists. A total of 140 handicapped children known to the district superintendents did not receive special education services in the 1975-76 school year. The total proportion of handicapped students served under all Alberta Education special funding programs was 12.95% of the grade 1-9 population.[10] When total enrollment, and not the average by school system was considered, the proportion became 9.7%. This approximates the commonly accepted theoretical expectancy of ten percent of students in need. Students served under the SETP grants comprised over one-half (6.51 percent) of the total students served.

Considering the criterion variables separately for rural/urban status, public/separate status and jurisdiction size a number of significant findings resulted. Where total service related to all special funding was considered, rural jurisdictions had a greater mean level of service (13.10 percent) than the urban jurisdictions (7.98 percent). Catholic separate jurisdictions served a greater proportion of its students (16.13 percent) under the combined special funding arrangements than the public jurisdictions (11.04 percent). No significant differences were noted under either breakdown for the proportion of students served

---

[10] Computed to accomplish compatability with the Saskatchewan study. Average of school system means and not a weighted average based on total provincial grade 1-9 enrollment. Based on a provincial total of 314,149 the percentage served equals 9.7%.

through the SETP grant scheme alone. Small and medium jurisdictions had greater percentages of students served (13.34 percent and 12.92 percent) than large jurisdictions (9.29 percent). Considering the SETP grants large jurisdictions provided the highest level of service (9.20 percent), followed by small jurisdictions (6.32 percent) and medium jurisdictions (3.43 percent).

For each of the criterion variables, the predictor and predictor control variables were entered into a regression analysis to determine which (if any) significantly contributed to the prediction of level of service provided by jurisdictions under the special grants. Predictor control variables were separately combined with the predictor variables in separate analyses. For the first criterion, (the proportion of students served in total by SETP, EOF and LDF grants), significant predictors were (in order of contribution): distance to a diagnostic centre; percent native; distance to a university and assessed valuation per child enrolled. This held when the predictor variables were combined with the rural/urban, public/separate and district size predictor control variables. When zones were included in the analyses significant predictors were (in order): zone 1 (Peace River); distance to a diagnostic centre; percent native and distance to a university. The appearance of zone 1 as a significant predictor was not unexpected since it has been the major beneficiary of the EOF compensatory funds. The reason for this is that zone 1 contains a number of school systems which have been able to qualify through low assessment and demonstration that the students are disadvantaged. Correlations between the predictor and control variables with the first criterion variable indicated that level of service increases with increasing distance to a diagnostic centre, percent native students and distance to a university. Level of service also increases with decreasing valuation per pupil enrolled. For the second criterion variable (proportion of students served through SETP support alone), none of the predictor variables contributed significantly to the prediction - except in the analysis which included zones. In that analysis, zone 2 (North Central West) showed a small degree of predictability which did not warrant further consideration.

The interpretation of the results was straight forward. All measures which significantly related to the first criterion variable may be seen as generally accepted indices of advantage/disadvantage. For instance, jurisdictions which are small, rural, separate and/or remote (as reflected in distances from diagnostic centres and universities) are generally considered less able to provide special services than their large, urban and/or public counterparts. In each case, as the degree of disadvantage increased so did the level of special education service provided. The same may be seen with the assessed valuation per child enrolled. As a rough measure of wealth or ability to fund education, assessed valuation per child enrolled was inversely related to the first criterion variable. This means that percent of students served under the special funding increased as this index decreased.

The first criterion studied considered the amount of service when all special grants were considered, and, as expected, due to the differential compensatory funding provided in Alberta, a positive relationship was found between amount and distance, remoteness and proportion of registered native children enrolled. An inverse relationship was found between amount and the index of wealth; the lower the equalized assessment per pupil, the greater the service provided.

Accordingly, some of the assumptions about factors related to level of special education service were not upheld. When the traditional, universally - applied special grant was considered (the SETP--second criterion variable) there was no relationship to any of the variables studied. Distance, size, remoteness, sparsity, wealth and the several human resource variables were shown to be unrelated to level of service in Alberta.

Conclusions

In the Alberta study different variables were found to predict the level of special education services than those reported in the Saskatchewan study (Rawlyk, 1974). This was not unexpected. Alberta Education had implemented a system of grant and specialist support in an effort to increase the level of special education services and to equalize the opportunity for handicapped students to receive the services. The results reported herein confirm the success of these programs. Overall level of service (average by district) to handicapped students in Alberta (12.95 percent) far exceeded the level of service reported by Rawlyk (1974) for the 1972-73 school year in Saskatchewan (5.0 percent). The overall level of service based on a weighted average (9.7 percent) closely matched the commonly used standard (10.0 percent). Support to the more disadvantaged jurisdictions has permitted them to offer a higher (externally supported) level of special education service than the more advantaged jurisdictions. This has not been accomplished at the expense of the more advantaged jurisdictions which also enjoy a high level of service supported through the more traditional special education funding.

Recommendations

The following recommendations arise out of the study:

1. IT IS RECOMMENDED THAT SUPPORT FOR SPECIAL EDUCATION BE CONTINUED THROUGH THE SETP, EOF AND LDF. With respect to amount, these special sources of funding have impressively served the purposes for which they were created.

11. IT IS RECOMMENDED THAT THE QUALITY OF THE SERVICES PROVIDED UNDER THE SPECIAL FUNDING ARRANGEMENTS BE EXAMINED. This study has shown that the amount of service promoted under the special grants has been successful. It is now important to determine the adequacy of these services in terms of quality.

Concerns about quality of existing service receive attention in two sections of this report:

Part II (reported next) examines in a very general way qualitative aspects of resource rooms and other arrangements for providing service; and

Part IV reports the perceptions of Alberta educators concerning the adequacy of support services.

PART II

LITERATURE REVIEW AND THE CENTRAL ALBERTA STUDY CONCERNING RESOURCE ROOMS AND OTHER SETTINGS FOR REMEDIATION

Research question #1

What are the relative merits of Resource Rooms, Segregated Special classes and Regular Classrooms in achieving the objectives of remedial instruction?

What types of students seem best served in each setting?

What are the implications of the findings for Alberta Education relative to leadership, regulations and funding?

Efficacy Studies of the Relative Merits of Resource Rooms, Segregated Special Classes and Regular Classrooms in Achieving the Objectives of Remedial Instruction

This phase of the Special Education Study examines the research evidence concerning the integration - segregation issue. Whether pupils are best placed in an integrated or segregated setting is important to those concerned with providing the most efficacious arrangement for remediation.

Since constraints of time and logistics did not permit the investigators to implement new studies, the existing research literature regarding placement of pupils for remediation was critically reviewed. Thus, in general terms only, answers were sought to the questions about the quality of remediation under various arrangements. Unfortunately, with one exception, the studies reviewed were based on teaching situations and restricted student populations based in other countries. Accordingly, they lack external validity. That is, the results may not be generalizable to the Alberta scene.

The exception is the study reported by Rhodes (1976) which compared the academic outcomes between resource rooms and regular classrooms in zone 4 in central Alberta. Here the schools, programs and teacher and pupil populations were sufficiently numerous and varied to permit generalizations. This was the only Canadian - based study which met the selection criteria established for inclusion in the review.[11]

The criteria used for selection of studies were that they be empirically-based, have internal validity and provide comparisons between different degrees of segregation. The empirical basis requirement meant that articles based on opinion and speculation were excluded; the results of pupil outcomes had to be expressed quantitatively. The internal validity criterion was the crucial one in judging the merits of a study. It answers the question whether or not the results are due to the remediation treatment. This meant that only those studies which employed a comparison group were included. Reports of studies which used a pretest-posttest single-group design or compared the results against a standardized test norm were excluded to ensure a reasonable degree of internal validity.

---

[11] An evaluation of an Alberta EOF compensatory project (Dryden & Nygaard, 1976) also met the selection criteria but was not included because it did not compare resource rooms with regular classrooms or segregated special classes. For the same reason an evaluation of an EOF remedial Project by Bienert (1977) was not included although the follow-up results are considered later.

The threats to internal validity listed by Campbell and Stanley (1966) were used as a checklist in selecting studies for review. The best studies were those that employed a true experimental design which had pupils randomly assigned to two or more of segregated, partially-segregated or integrated groups. There were few of these. Most of the investigators had been compelled to use existing classes. In order to render the groups more comparable, students in each group were often paired (matched) on mental age, chronological age and achievement. Campbell and Stanley (1966, p.49, 70-71) have written disparagingly of matching as a technique to establish equivalence. Instead, they recommend the use of multiple covariate analysis of covariance, a statistical procedure, to adjust posttest scores according to differences on pretest measures. As with random assignment, studies which employed this procedure were very few in number.

Accordingly, the results from the review of the literature (discussed next) should be considered with caution. The reasons for this admonition are as follows:

1. The issue of integrated versus segregated settings for remediation has never been rigorously studied. The reason is that instructional variables have never been held constant across the comparisons. Accordingly, placement <u>per se</u> has not been isolated for examination. Perhaps the difference, or lack of difference, in many of the comparisons has been due to instructional factors and quite unrelated to administrative arrangement.

2. As noted previously, the external validity or generalizability of the findings to Alberta are not known. The studies were based in other countries and often involved very restricted and different (to Alberta) pupil populations and teaching situations. Some of the investigations reported were conducted during the 1930-1960 period. As a consequence, the application of new techniques such as contingency-management, programmed materials and technological aids such as the language master would not be reflected in the results.

3. The adequacy of the criterion measures used in student achievement studies is always a concern to researchers. This problem is particularly acute in measuring achievement of handicapped learners who sometimes have difficulty with the format of the standardized group test. As a result, the measures used may often have been inadequate in detecting shifts in development which actually occurred.

The majority of the studies on the efficacy of placement concern pupils who are educable mentally handicapped (EMH). However, the recent increase in Alberta in special teachers' positions is largely due to expansion of services for those in the normal range of intellectual functioning who are not suffering from any apparent sensory or mental functioning deficits. They are, however, grossly underachieving in some competency deemed important by the school. These pupils have been labelled learning disabled (LD). Since this category has been popularized only during the last dozen years this may account for the paucity of research in this area. Only five studies (Glavin et al, 1971; Haring & Phillips, 1962; Sabatino, 1971; Bradfield et al, 1973; and Seaman, 1973) were reviewed that analyzed placement for LD children.

In Alberta, the resource room is frequently populated with children with a variety of handicaps. In many schools there is no segregated special class for the EMH child. Instead, these pupils who are in a minority are grouped with LD children in a resource room. Three of the studies reviewed (Brigadoon, 1973; Nowell, 1969; and Rhodes, 1976) considered these mixed classes (termed non-categorical). The Rhodes (1976) study concerned children in this type of grouping who are receiving special help in resource rooms or in regular class. Since this study is the only one based in Alberta which met the selection criteria, it is reported in more detail at the end of the review.

REVIEW OF EMPIRICAL RESEARCH ON ACADEMIC ACHIEVEMENT IN VARIOUS INSTRUCTIONAL SETTINGS

A number of investigators, beginning with Bennett (1932), have reported studies relevant to the relative effectiveness of various instructional settings as the locus for remediation. This review categorizes the findings by the type of student served - educable mentally handicapped (EMH), learning disabled (LD) and non-categorical (where several handicapping conditions are represented). The comparisons made according to the degree of segregation from regular class students are:

1) regular classrooms (total integration of remedial students) versus segregated special classes (total segregation),

2) regular classes versus resource rooms (partial integration), and

3) segregated special classes versus resource rooms.

The majority of the efficacy studies comparing special classes with integrated groupings centre on the academic benefits to the educable mentally handicapped. The most frequent comparison is between the totally segregated special class and the totally integrated regular class as locations for remedial instruction in reading and arithmetic.

Table 14 summarizes the results of twenty-four investigations concerning the efficacy of various settings for remediation in reading (primarily reading comprehension). The results indicate that when a difference was found, the totally integrated arrangement (regular class) or the partially integrated grouping (resource room) was preferable to the segregated classroom.

The symbols and abbreviations used in this and the following tables are as follows:

Reg. = regular classrooms where the handicapped children are totally integrated with non-handicapped pupils.

Seg. = segregated special classrooms where the handicapped are separated for instruction most of each school day.

Res. = resource room arrangements which provide segregated remedial instruction for short period(s) each day.

> = symbol meaning "greater than." In this instance > means that the mean differences are statistically significant at the 0.05 level (the probability is five chances or less in one hundred that the differences are due to chance factors) and are in favor of the category preceding the symbol. e.g. Reg.>Res. signifies that the regular classroom group gained, or improved, significantly more than the resource room group.

NS = No statistically significant difference in the comparison.

Considerable control of selection bias and confounded variables was achieved in the Jordan (1965) and the Goldstein et al (1965) studies, in that pupils (none of whom had previous special class experience) were randomly assigned to either special or regular classes. In addition the special class curricula were planned and, in the Goldstein et al study, the special class teachers were supervised during the four years of the study. Both investigators found that short-term results favored the regular class for some groups. However, after four years the differences were not significant.

Table 14

Classroom Groupings for Educable Mentally Handicapped Pupils:

Comparisons of Results in Reading

Reference	Comparisons and Findings								
	Reg > Seg	Seg > Reg	NS	Reg > Res	Res > Reg	NS	Res > Seg	Seg > Res	NS
Bennett (1932)	*								
Pertsch (1936)	*								
Elenbogen (1957)	*								
Blatt (1958)			*						
Ainsworth, et al (1959)			*			*			*
Cassidy & Stanton (1959)	*								
Schell (1959)			*						
Thurstone (1959)			*						
Brown (1961)	*								
Mullen & Itkin (1961)			*						
Warren (1962)			*						
Bacher (1965)			*						
Goldstein et al (1965)			*						
Jordan (1965)			*						
Hœltke (1966)	*								
Carroll (1967)									*
Smith & Kennedy (1967)						*			
Welch (1967)							*		
Green (1969)			*						
Rodee (1971)							*		*
Davis (1972)									*
Rosenkranz (1972)	*								
Rouse (1973)			*						
Rubin et al (1973)	*								
TOTALS	8	0	11	0	0	2	2	0	4

Table 15 summarizes the findings of eight studies of reading other than paragraph learning and comprehension.

Table 15

Classroom Groupings for Educable Mentally Handicapped (EMH) Pupils: Comparisons of Results in Several Aspects of Reading

Aspect of reading	Reference	Comparisons and Findings								
		Reg > Seg	Seg > Reg	NS	Reg > Res	Res > Reg	NS	Res > Seg	Seg > Res	NS
Word Knowledge	Ainsworth et al (1959)			*			*			*
	Cassidy & Stanton (1959)	*								
	Thurstone (1959)			*						
	Mullen & Itkin (1961)			*						
	Goldstein et al (1965)			*						
	Zito & Bardon (1969)	*								
	Rodee (1971)			*			*			*
Sound Blending	Goldstein et al (1965)									
	- low IQ EMH		*							
	- high IQ EMH & total			*						
Word Discrimination	Goldstein et al (1965)			*						
	Rodee (1971)			*			*			*
TOTALS		2	1	8	0	0	3	0	0	3

Regular class was superior to segregated special class in the Zito and Bardon (1969) and the Cassidy and Stanton (1959) matched-pairs studies of word knowledge. The very closely controlled study by Goldstein et al (1965) concerning word discrimination found segregated special class

superior to regular class. The remainder of the comparisons indicate no differences between degrees of segregation arrangements and special class.

The results of comparison studies which used spelling as the criterion are summarized in Table 16 and those for arithmetic in Table 17 again with identical patterns of results.

Table 16

Classroom Groupings for Educable Mentally Handicapped (EMH) Pupils: Comparisons of Results in Spelling

Reference	Comparisons and Findings					
	Reg > Seg	Seg > Reg	NS	Res > Seg	Seg > Reg	NS
Bennet (1932)	*					
Pertsch (1936)	*					
Blatt (1958)			*			
Cassidy & Stanton(1959)	*					
Schell (1959)			*			
Thurstone (1959)						
-1st year results	*					
-2nd year results			*			
-Low and High IQ EMH			*			
Goldstein et al (1965)						
4th year-Low IQ EMH		*				
-High IQ EMH			*			
-Total EMH			*			
Carroll (1967)						*
Davis (1972)						*
Rosenkranz (1972)	*					
Bradfield et al (1973)						
: grade 3			*			
: grade 4			*			
Rouse (1973)			*			
Rubin et al (1973)		*				
TOTALS	6	1	9	0	0	2

Table 17

Classroom Groupings for Educable Mentally Handicapped (EMH) Pupils:

Comparisons of Results in Arithmetic

Reference	Comparisons and Findings								
	Reg > Seg	Seg > Reg	NS	Reg > Res	Res > Reg	NS	Res > Seg	Seg > Res	NS
Bennett (1932)	*								
Pertsch (1936)	*								
Elenbogen (1957)	*								
Blatt (1958)		*							*
Ainsworth et al (1959)						*			
Cassidy & Stanton (1959)	*								
Schell (1959)			*						
Warren (1962)			*						
Brown (1961)	*								
Thurstone (1959) (2nd yr.)			*						
Thurstone - Low IQ		*							
High Comput.			*						
Thurstone - Low vs High (reasoning)			*						
Goldstein et al (1965) : 4 yrs - (Low IQ)		*							
: 4 yrs - (High IQ & Total)			*						
Hoeltke (1966)	*								
Carroll (1967)									*
Smith & Kennedy (1967)						*			
Rodee (1971)			*			*			*
Davis (1972)									*
Rosenkranz (1972)	*								
Mullen & Itkin (1961) : 1st yr	*								
: 2nd yr			*						
Bradfield et al (1973) : grade 4	*								
: grade 3			*						
Rouse (1973)	*								
Rubin et al (1973)	*								
TOTALS	11	3	9	0	0	3	0	0	4

For those studies (Table 17) extending beyond one year (Mullen and Itkin, 1961; Thurstone, 1959; Goldstein et al, 1965) the comparisons show no significant differences between regular class and segregated special class with one exception. Both Thurstone (in arithmetic computation) and Goldstein et al (in total arithmetic) found segregated class superior for the low IQ EMH.

Few studies have investigated the relative efficacy of various degrees of segregation for the instruction of learning disabled (LD) children. A well controlled study by Glavin et al (1971) compared academic achievement of LD pupils who were randomly assigned to either resource rooms or regular class. They found two academic areas in which the resource room was more beneficial - reading comprehension and arithmetic fundamentals. In two other areas measured by the California Achievement test--reading vocabulary and arithmetic reasoning--no significant differences were found (see Table 18). Regular class teachers used in this comparison apparently did not provide any special attention or assistance to the LD pupils enrolled. In the Bradfield et al (1973) study, which also employed random assignment of pupils, the researchers modified instruction in the regular class. While regular class placement was found to be more effective for arithmetic achievement than segregated class, no differences were found in California Reading Test scores. These findings are also at variance with Haring and Phillips (1962) whose results favored segregated class arrangements.

Table 18

Classroom Groupings for Learning Disabled Pupils: Comparisons of Results in Academic Areas

Academic Area	Reference	Comparisons and Findings					
		Reg > Seg	Seg > Reg	NS	Reg > Res	Res > Reg	NS
Arithmetic							
	Bradfield et al (1973)	*					
	Glavin et al (1971)					*	*
	Haring & Phillips (1962)		*				
Reading							
	Bradfield et al (1973)			*			
	Haring & Phillips (1962)		*				
	Glavin et al (1971)					*	*
TOTALS		1	2	1	0	2	2

In smaller schools and school systems it is common practice to combine EMH and LD children for remedial instruction. Only three of the studies considered the benefits for such heterogenous groups in resource rooms compared with placement in regular class.

Table 19 shows that only Nowell (1969) found the resource room superior. Rhodes (1976) and Brigadoon (1973) reported no differences. However, in both of these studies regular class teachers provided individualized remedial instruction.

Table 19

Classroom Groupings for Non-Categorical Pupils:
Comparison of Results in Academic Areas

Academic Area	Reference	Comparisons and Findings		
		Reg > Res	Res > Reg	NS
Arithmetic				
	Nowell (1969)		*	
	Rhodes (1976)			*
Reading				
	Brigadoon (1973)			*
	Nowell (1960)		*	
	Rhodes (1976)			*
Spelling				
	Brigadoon (1973)			*
	Rhodes (1976)			*
TOTALS		0	2	5

Individual intelligence tests have occasionally been used as measures of achievement. The WISC and Stanford Binet (judged superior to the typical measures of achievement in validity and reliability) have been used to compare the impact of regular class instruction with segregated class and with resource rooms. As illustrated in Table 20

Warren (1962) found no differences between regular and segregated classes. Rouse (1973) found the regular class superior to the segregated for performance IQ but no difference for verbal IQ. Both of these investigators employed quasi-experimental designs involving either matched-pair procedures or analysis of covariance in attempting to equate the groups. Smith and Kennedy (1967), using the more defensible procedure of random assignment of pupils to resource room or to regular class, found no significant differences. Tisdal (1962), who also employed random assignment, found no significant differences in non-verbal development. However, on three measures of verbal functioning the results favored the segregated class program. The significant findings were attributed to the particular program developed for the special class which was not taught in the regular class.

Table 20

Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons of Results in General Intellectual Functioning

Reference	Comparisons and Findings					
	Reg > Seg	Seg > Reg	NS	Reg > Res	Res > Reg	NS
Smith and Kennedy (1967)						*
Warren (1962)			*			
Performance I.Q.						
-Rouse (1973)	*					
-Tisdal (1962)			*			
Verbal I.Q.						
-Rouse (1973)			*			
-Tisdal (1962)		*				
-Goldstein et al (1965)			*			
TOTALS	1	1	4	0	0	1

The Tisdal (1962) and Goldstein et al (1965) studies were unique in that a particular program was developed, implemented, supervised and monitored in the special class. Since the same program and observations were not carried out in regular classrooms, the differences may be attributable to the program rather than the placement. However, it is claimed that goals other than academic benefits are assigned higher priority for EMH children and that the segregated special class is better equipped to provide for development in social-emotional areas. Succeeding tables summarize the findings in affective areas.

Table 21 illustrates the results of efficacy studies which compared the segregated class with regular class and with resource rooms relative to development of self-concept, goal setting and motivation, and personal adjustment.

Table 21

Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons in Self-Concept, Motivation and Personal Adjustment

Affective Area	Reference	Comparisons and Findings					
		Reg Seg	Seg Reg	NS	Res Seg	Seg Res	NS
Self-Concept							
	Cassidy & Stanton (1959)		*				
	Carroll (1967)				*		
	Schurr & Brookover (1967)		*				
	Meyerowitz (1962)	*					
	Mooney (1969)				*		
	Bradfield et al (1973)			*			
	Rouse (1973)			*			
Goal Setting							
	Zito & Bardon (1969)	*					
Motivation							
	Mullen & Itkin (1961)			*			
Personal Adjustment							
	Blatt (1958)			*			
	Cassidy & Stanton (1959)			*			
	Johnson (1961)			*			
TOTALS		2	2	6	2	0	0

Only Meyerowitz (1962) was able to control for selection bias by randomly assigning pupils to regular or segregated classrooms. The findings on a measure of self-concept favored the regular classroom. Rouse (1973), using analysis of covariance to control for group differences, found no significant differences. The remaining investigators using matching techniques found no differences. Those findings that were significant favored integration two to one. Table 22 summarizes the findings from studies which also compared segregated special classes with either regular or resource classrooms for EMH children. Specifically, the results deal with moderately handicapped childrens' development of skills and feelings in relating to others.

Table 22

Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons of Results in Social Development

Aspects of Social Development	Reference	Comparisons and Findings					
		Reg > Seg	Seg > Reg	NS	Reg > Res	Res > Reg	NS
Social-Emotional							
	Elenbogen (1957)		*				
	Cassidy & Stanton (1959)		*				
	Schell (1959)			*			
	Mullen & Itkin (1961)			*			
	Kaplan (1961)			*			
Social-Adjustment							
	Flynn (1970)						*
	Green (1969)		*				
	Kern & Pfaeffle (1962)			*			
	Mullen & Itken (1961)			*			
Social Maturity							
	Blatt (1958)		*				
	Green (1969)			*			
	Schell (1959)			*			
	Kern & Pfaeffle (1962)			*			
	Smith & Kennedy (1967)						*
Total Adjustment							
	Blatt (1958)			*			
	Thurstone (1959)		*				
	Mullen & Itkin (1961)			*			
TOTALS		0	5	10	0	0	2

The bulk of the findings on social adjustment reported in Table 22 show no significant differences in the comparisons with segregated special classes. The five studies reporting a difference found the segregated class superior to the regular class. In each of these studies (demonstrating superiority of segregated classes) teachers' ratings of adjustment were included. Some of the investigators felt that teachers of special classes viewed handicapped pupils differently and against different backgrounds than was the case for regular class teachers and would therefore rate EMH children higher on social maturity scales. However, one of the studies which favored segregated classes included a teacher-free measure - the California Test of Personality (Cassidy & Stanton, 1959). Blatt (1958), found no significant differences between segregated and regular class according to gains determined by the same test. Neither investigator was able to control for selection bias by random assignment of pupils.

Only Gotlieb and Budoff (1972) of those referenced in Table 23 employed random assignment procedures. They found the regular class superior to segregated arrangements relative to attitude toward school or teachers. Except for Elenbogen (1957), who found no significant differences, the remaining investigators reported results favoring segregated classes.

Table 23

Segregated vs Regular Class Groupings for Educable Mentally Handicapped Pupils: Comparisons in Attitude Toward School or Teachers

Reference	Comparison and Findings		
	Reg > Seg	Seg > Reg	NS
Cassidy & Stanton (1959)		*	
Schell (1959)		*	
Kern & Pfaeffle (1962)		*	
Elenbogen (1957)			*
Green (1969)		*	
Gotlieb & Budoff (1972)	*		
TOTALS	1	4	1

Acceptance by regular class peers and by handicapped peers has been studied by means of sociometric devices. None of the results tabulated in Table 24 support regular class groupings over segregated or partially integrated settings when peer acceptance is considered. Rucker et al (1969) found that the EMH children did not have realistic perceptions about their acceptance by others; they tend to over-grade themselves on this criterion. The results of this review indicate that EMH children tend to be more acceptable to normal peers the greater the degree of segregation. The resource room children were found as acceptable by normal peers as those handicapped children who remained in regular class (Smith & Kennedy, 1967).

Table 24

Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons of Results in Acceptance by Peers

Reference	Comparisons and Findings								
	Reg > Seg	Seg > Reg	NS	Reg > Res	Res > Reg	NS	Res > Seg	Seg > Res	NS
Thurstone (1959)		*							
Gotlieb et al (1971)		*							
Smith & Kennedy (1967)						*			
Goodman et al (1972)									
- acceptance by boys		*							
- acceptance by girls									
Sheare (1974)							*		
TOTALS	0	3	1	0	0	1	1	0	0

The studies listed in Table 25 used indices such as classroom behavior and attendance to compare the effect of different instructional settings on EMH children. As indicated in the table 55 percent reported no significant difference, 27 percent favored regular class, 9 percent favored segregated and 9 percent resource room.

As the long term objective of special education programs for all handicapped children is adequate adjustment and adaptation in their roles as adults, follow-up studies are extremely important. Porter and Milazzo (1958) reported that graduates from an EMH special class were superior on a variety of behaviors related to social competence, to EMH graduates from regular class. For example, EMH special graduates had longer periods of full-time employment and tended to change residence less often.

Table 25

Classroom Groupings for Educable Mentally Handicapped Pupils: Comparisons of Results in Behavior

Reference	Comparisons and Findings								
	Reg > Seg	Seg > Reg	NS	Reg > Res	Res > Reg	NS	Res > Seg	Seg > Res	NS
Blatt (1958)			*						
Glavin et al (1971)				*					
Rodee (1971)			*						
Rubin et al (1973)			*						
Schell (1959)									
- teachers' ratings			*						
- supervisors' ratings		*							
Mullen & Itkin (1961)	*								
Bradfield et al (1973)	*								
Gampel et al (1974)	*								
TOTALS	3	1	4	0	1	1	0	0	1

Returning to learning disabled (LD) children (Table 26), on three measures of affect Bradfield et al (1973) found no differences between pupils randomly assigned to segregated special class and regular class when structured, precision-teaching procedures and other approved practices were employed in both. These results indicate that LD children can develop acceptable behaviors and attitudes as well in regular class provided that instruction is modified sufficiently. In the study by Haring and Phillips (1962) where regular class instruction was unchanged from normal practice, the results favored the segregated structured class. This setting was also significantly better than a segregated unstructured class where more permissiveness was practised by teachers.

Table 26

Classroom Groupings for Learning Disabled Pupils:
Comparisons of Results in Affective Areas

Affective Area	Reference	Comparisons and Findngs					
		Reg > Seg	Seg > Reg	NS	Reg > Res	Res > Reg	NS
Behavior							
	Glavin et al (1971)				*		
	Haring & Phillips (1962)		*				
	Bradfield et al (1973)			*			
Social-Emotional							
	Bradfield et al (1973)			*			
Self-Concept							
	Bradfield et al (1973)			*			
	Seaman (1973)						*
Attitude of Teachers							
	Seaman (1973)						*
Social Acceptance							
	Seaman (1973)						*
TOTALS		0	1	3	0	1	3

Glavin et al (1971) employed random assignment of pupils in their comparison of resource rooms with regular class. The resource room operation included a structured response-reinforcement contingency program while regular classes were conducted in the normal manner. The resource room was found superior in modifying behavior. However, the behaviors were not transferred to the regular class setting when pupils returned. In a follow-up study Glavin (1974) found no transfer of newly acquired behaviors to regular class. These findings support the notion that regular class teachers require assistance or training in order to maintain the new behaviors or, alternatively, that behavior modification should take place in the regular class.

The Seaman (1973) study reported no differences between groups labelled as perceptually handicapped on two pupil measures and on a measure of teacher's attitude.

CONCLUSIONS

The conclusions derived from the above review of the literature concerning the relative efficacy of resource rooms, segregated special classes and regular classes are enumerated below according to:

1) general type of handicapping condition (educable mentally handicapped, learning disabled and non-categorical), and

2) category of objectives for special education (cognitive and affective).

Educable Mentally Handicapped

Cognitive domain objectives The principle conclusions derived from the review of studies of children in the 50 to 80 IQ range in relation to academic achievement and cognitive functioning are based on the following:

1) Most of the studies reviewed show no significant differences between regular class and some form of segregation.

2) Those that show significant differences favour either regular class or resource room over segregated special class.

3) Two studies employed a true experimental design which controlled for selection. In the longitudinal (4 year) study of primary school children by Goldstein et al (1965) the general finding was no difference between regular class and segregated special class in academic achievement and IQ change. A nonsignificant finding was also reported by Smith and Kennedy (1967) for IQ development in their comparison of resource rooms and regular classes.

4) Two groups investigated whether level of IQ within the EMH group was related differentially to the relative efficacy of different degrees of segregation. Cassidy and Stanton (1959) in a post hoc study found the regular class superior to segregated class at each of the following IQ levels: 50 - 59; 60 - 69 and 70 - 75. Goldstein et al (1965) found that those pupils who scored below IQ 80 at the end of the four year project benefited most from segregated class in some academic areas. However, Guskin and Spricker (1968) indicated that this post hoc finding must be discounted since: initial IQs were not used (terminal IQs were used instead); children who initially scored above IQ 85 were excluded from subsequent testing (due to regression some would have been included in the below - IQ 80 group after the second test); the initial random assignment was not carried out within IQ levels; and too few pupils were left in the below - IQ 75 groups at the end of the project to permit safe generalizations.

5) While a definitive study of the classroom setting which best meets the cognitive needs of EMH children has yet to be done, the Goldstein et al (1965) study was exemplary in many ways. While it was designed to provide relatively ideal conditions in the special classes constituted for the study this was not the case for the regular classes comprising the control group. However, the no significant differences results may have been a function of the curriculum selected and implemented, and unrelated to this issue of placement in segregated or regular class. To ascertain the best placement, curriculum, and teaching should be held constant across instructional settings. In this way improved readings on the outcomes from segregation and integration per se could be obtained.

The general conclusions based on the foregoing are:

1) The research to date has not definitely established the best placement for moderately handicapped EMH children with respect to cognitive development and academic achievement.

2) There is virtually no evidence to support segregation to achieve cognitive objectives.

3) The weight of the findings suggest that either integration in regular classes is advisable, or the locus of instruction does not matter. (Perhaps instructional variables, and not these administrative arrangements, are crucial to success.)

Accordingly, the segregation model in common use for EMH children, in and of itself, cannot be supported by the research evidence. It may well be that segregation is superior in facilitating cognitive gains provided that more of the features of the typical regular class are incorporated in the teaching situation. Examples of such features include: more focus on academic objectives; higher expectations by the teacher and the pupil; and increased competition and pressure to succeed. However, data to support such assumptions are not now available.

The low relative academic achievement or lack of difference with achievement in regular class, by EMH pupils in segregated classes has been explained by the emphasis in segregated classes on goals in the affective domain. If this is the case, the segregated setting should result in superior gains in the affective domain.

Affective domain objectives Three of the investigations reviewed used the true experimental design in comparing achievement in the affective areas between regular and segregated classes. Goldstein et al (1965) found no difference in social knowledge. Meyerowitz (1962) found no difference relative to self-concept. Gotlieb and Budoff (1972) found the segregated class inferior to regular class in attitude toward school. However, the opposite was true for acceptance by normal peers.

The general conclusions are:

1) For self-concept the results are mixed, with those that show a difference favoring some form of integration (3:2).

2) For motivation and personal adjustment no differences can be attributed to either segregated or regular class arrangements.

3) Support for segregated special classes for the EMH child relative to social development was provided by the literature. While none of the researchers found regular class superior to segregated, five demonstrated segregation as superior. In ten other studies no significant differences were found. These findings must be qualified in that a number used teacher ratings as measures of social development. Since special class teachers are thought to operate from a different perspective than regular class ones this may have resulted in inflation of social development scores in special classes. Two studies comparing resource and regular settings found no difference in measures of social development.

4) Additional support for segregated special classes is generated by the findings concerning attitude toward school and teachers, and acceptance by peers. Only the Gotlieb and Budoff (1972) study favored regular over segregated class groupings on the attitude criterion. No studies, including the Gotlieb and Budoff study, found regular class superior to the segregated class on measures of peer acceptance. The two studies on peer acceptance involving resource rooms revealed no difference in a comparison with regular class and a difference in favor of partial integration over segregation.

5) Support for total segregation is not found in the studies which assessed behavior. However, Glavin et al (1971) found the partial integration of the resource room superior to regular class.

In general, strong support exists for use of the segregation model for moderately retarded pupils when acceptance by peers has priority. Moderate support is provided when attitude toward school and teachers, and social development are the objectives. Minimal evidence exists to justify segregated arrangements for development of self-concept. In the areas of motivation, personal adjustment and behavior virtually no justification exists for segregated arrangements.

In contrast to achievement of cognitive objectives (where no support for total segregation was found) some of the objectives in the affective domain are achieved in varying degrees when segregation is practised. Unfortunately, there were relatively few studies which compared partial segregation (the resource room) with total segregation. Three of these showed benefits in affective areas which were attributed to resource rooms and one showed no difference. Most of the findings based on comparisons of regular class and resource rooms reported no difference results. The one showing a difference (Glavin et al, 1971) indicated partial segregation superior to total integration.

As noted previously in the comments on cognitive objectives, the relation of degree of segregation per se to development in affective areas has not been adequately researched. It may be instructional variables which largely account for the results noted above, and not the grouping practices employed.

The Learning Disabled

Cognitive domain objectives Unlike the numerous investigations concerning academic achievement of EMH children, those involving LD children favor some form of segregation. However the limited nature of the evidence available suggests that the issue of integration versus some form of segregation for the learning disabled has not been resolved. The only study which compared resource and regular class settings followed the typical practice of not modifying instruction in the regular class. In spite of this Glavin et al (1971) reported half their finding as not significant with the other half showing the resource room as superior. The other investigation which employed a true experimental design compared the segregated and regular class (Bradfield et al, 1973). In this instance instructional arrangements were modified in the regular class. This particular regular class arrangement was found to be superior in arithmetic, but there was no difference in reading.

The degree of severity of the handicapping condition which characterized these children is not evident from the reports. Accordingly, it is not possible to compare effects of different placements for the severely and moderately learning disabled.

Affective domain objectives As in the area of cognitive development for the LD there is a paucity of research relative to the most effective placement when affective domain objectives are the focus.

General conclusions are:

1) The two studies which compared resource and regular classes yielded mixed results; one favored the resource room (on behavior) and the other showed no differences on three other measures.

2) A similar pattern is reported for two comparisons of regular and segregated settings; one favored the segregated room (for behavior again) and the second produced no differences for behavior and in other areas.

3) For LD children there was no instance which showed the regular class superior to some degree of segregation when affective outcomes were considered.

4) The question of the most appropriate placement has not been definitely answered. The limited evidence available suggests that placements per se may not be the crucial variable. Bradfield et al (1973), for example, modified instruction in the regular class and found the results equal to those from a segregated class.

Non-Categorical Pupils

Cognitive domain objectives Only three reports were found that examined the effect of grouping arrangements on groups comprised of children with differing handicaps. All three compared only the resource room with regular class with respect to academic achievement.

General conclusions are:

1) The predominant finding in reading and spelling achievement is one of no difference. One study demonstrated superiority of the resource room.

2) For arithmetic, one finding favored the resource room over regular class and the other showed no difference.

3) None of the results showed superiority of the regular class. However, the regular class setting may provide equal benefit even though it is not superior to the resource room. The equal benefit finding is more likely if the regular class teacher is provided the necessary professional support and does, in fact, implement individualized remedial programs (Rhodes, 1976). However, more studies and ones employing more rigour are required to provide a definitive answer about the best grouping arrangement for mixed classes.

Affective domain objectives No reports were found for investigations which examined the achievement of affective domain objectives for mixed (non-categorical) classes.

A related question exists relative to combining for instruction LD (normal range IQ) students with EMH (below normal IQ) pupils. Johnson (1962) has stated that, when mental ages are equated, mentally handicapped pupils and normal children learn in the same way and to the same level. To Johnson this conclusion represents a paradox relative to placement which he expresses as follows:

> Why are mentally handicapped children achieving (in all areas of learning including the social) significantly lower than normal children of the same mental age?...What has been added to or removed from the learning situation in the special class that causes children to perform at a significantly lower level than the mentally handicapped who have remained in the regular grades? (p.68)

In his reference to regular grades Johnson was considering normal children. Information is needed in the situation where the EMH child is grouped for instruction with LD children. Perhaps the same paradox exists in such an instance.

If variables in the teaching and learning situation are the really significant ones then direction is provided for further study. The mix of children with varying handicaps should also be considered in such investigations.

A conclusion which merits repetition is that the degree of segregation per se has never properly been investigated because teaching and learning activities have not been held constant for both sides of the comparisons.

Considering the variety of teaching and learning situations existing in the studies reported the results are variable with one exception. EMH children generally benefit more academically from placement in regular class than in segregated class. The variable results with respect to type of disability and degree of integration in the other comparisons suggest that decisions about grouping procedures may not be the crucial ones. Decisions concerning the support to teachers and their handicapped pupils, regardless of instructional setting, may be the really important ones.

The study summarized next (Rhodes, 1976) is important in that it held constant the consultative support to teachers and the service to pupils across the two types of groupings compared. It also provides a modicum of external validity to the efficacy findings since one can generalize to an entire region within the province of Alberta. All other studies reviewed were based in the United States and most dealt with very restricted populations.

The Central Alberta Study: A Comparison of Regular Classrooms and Resource Rooms As Settings for Remediation of Academic Skills

This study concerned the pupil outcomes aspect of a project funded by the Learning Disabilities Fund which was conducted in Zone 4 in central Alberta to provide an answer to the question "Which remediation setting, the resource room or regular class, provides the greater academic benefit to pupils?"

The sample of pupils was drawn from a population of mainly moderately handicapped pupils who had been placed on individualized remedial programs during 1973-74. The pupil population consisted of approximately 900 children identified mainly as learning disabled but containing a small number who were educable mentally handicapped. Every second name was selected of those on the program lists for each of resource room and regular class. In this fashion 210 from resource rooms and 210 from regular classes were chosen.

A non-equivalent comparison group design was employed structured after the Campbell and Stanley (1966) Design Ten. Since the results of the pretesting indicated that the groups were not comparable initially on achievement (the regular class means were higher) an analysis of covariance technique was employed to adjust the remediation rates. The baseline rate of development up to the time of the pretest (in grades per year) was used as the covariate.

The students were pretested and posttested with the Peabody Individual Achievement Test (PIAT) battery. Remediation rates of progress were computed based on the interval between the times of the pretest and the posttest and, as with the baselines rates, were expressed as grades per year. Operationally defined in this way, the range of lengths of remediation periods was three to five months. Pretesting of nearly all pupils occurred sometime after they had been placed on remedial programs. This limitation occurred equally across the groups compared with the effect of: increasing baseline rates of development (grades per year up to the pretest); and decreasing remediation rates (progress as grades per year between pretest and posttest). Accordingly, the results of both remediation treatments are conservative ones.

Comparisons were made between the adjusted average remediation rates for the groups in regular and resource room classes. This was done for each of the areas represented by the subtests on the PIAT and for the total test.

The results and analysis reported in Table 27 indicates that none of the comparisons of remediation rates between resource and regular groups yielded statistically significant differences. This finding held across all subtest areas - mathemetics, reading recognition, reading comprehension, spelling, general information - as well as the adjusted remediation rate based on PIAT total scores. A student was considered to have

benefited from remediation if his remediation rate was higher than the baseline rate. A separate analysis compared the proportion of students benefiting in resource rooms with the proportion in regular classes. Table 27 reports these as percentages for each academic area measured by the PIAT. None of the differences between the resource and regular groups are statistically significant. The proportions benefiting in the subtest areas vary from 53 percent to 70 percent. The total test proportions provide summary information. Here 75 percent of the regular class group and 71 percent of those in resource rooms improved their rates of development.

In summary, the answer to the question, "What is the relative efficacy of resource and regular classes as settings for remediation?" is then - there is no difference. The discussion in the article suggested that support from a variety of sources was likely needed to achieve the results reported. Provincially, support was provided by the Learning Disabilities Fund Grant to provide the Learning Assistance Field Service consultants mentioned. These professionals provided service in diagnosis, program planning and follow-up consultation in equal fashion between resource and regular teachers and their pupils. Locally, the school system and the school provided assistance. On a personal basis both groups of teachers were likely equally committed and accepting of support. The teachers in regular class had referred pupils for assistance, and implemented the individualized programs provided in consultation with the Learning Assistance Field Services consultants.

The author concluded that without this commitment and assistance no average improvement in rate of academic progress would have occurred. That is, the average rates established on pretest would have been retained if the pupils had remained in the typical regular class. The remediation rates resulted from teacher commitment, the application of local resources and the professional assistance provided.

Table 27
Average Improvement in Rates of Progress and Proportion of Students Benefiting from First Year of Remediation: Resource Room and Regular Class Organization Compared

Subtest and Organization	Rates of Progress (grades per year) Baseline Rate 1	Remedial Rate 2	Proportion Benefiting* %	Significance of Difference in Adjusted Rate 2
Mathematics				
Regular	0.788	1.94	70	NS
Resource	0.712	1.39	63	
Reading Recognition				
Regular	0.765	1.10	63	NS
Resource	0.692	1.06	55	
Reading Comprehension				
Regular	0.733	1.50	59	NS
Resource	0.705	1.20	53	
Spelling				
Regular	0.795	1.09	60	NS
Resource	0.700	0.81	54	
General Information				
Regular	0.903	1.78	60	NS
Resource	0.768	1.65	60	
Total				
Regular	0.783	1.41	75	NS
Resource	0.668	1.31	71	
Combined Groups N=(420)	0.726	1.37		

*A difference >8.7% was needed for significance at $p<.05$

PART III

ON-SITE INTERVIEWS OF SPECIAL EDUCATION TEACHERS AND THEIR ADMINISTRATORS: SUPPORT SERVICES TO REGULAR CLASS TEACHERS

: THE RESPONDENTS

: THE QUESTIONS AND RESPONSES ABOUT THE SPECIAL CLASS TEACHERS' ROLE AS A RESOURCE TO OTHER TEACHERS

: LITERATURE REVIEW

In varying degrees, Special Class teachers provide consultative assistance to other teachers. Relative to this consultative role for each of a number of areas of disability (service areas)--

How willing is the special class teacher to provide service?

How willing is the regular class teacher to receive service?

How frequent is the service?

How adequate is the service?

RESPONDENTS

The Teacher Group

During June 1976, special education consultants from Alberta Education interviewed, on site, special education teachers. A random sample consisting of every fifth teacher listed from the Type B category (teachers of the moderately handicapped) was selected. One hundred and thirty-eight (95.8%) of those selected were interviewed. Reasons for exclusion included improper classification and illness at the time of interview.

As illustrated in Table 28, 64.5% of the teachers had taught for over five years (40.6% for over 10 years) and 55.1% had over two years experience in special education.

Table 28

The Teacher Group: Teaching Experience

Experience	Total Years Teaching Experience	Years Experience in Special Education
Less than 1 year	6 (4.4%)	32 (23.2%)
1 - 2 years	9 (6.5%)	30 (21.7%)
2 - 5 years	34 (24.6%)	47 (32.1%)
5 - 10 years	33 (23.9%)	25 (18.1%)
More than 10 years	56 (40.6%)	4 (2.9%)

Over sixty-eight percent had completed three or more courses in special education. Only 15.9% had not received any formal training in special education (Table 29).

Table 29

The Teacher Group: Number of Courses in Special Education

Courses	Frequency
More than five	53 (38.4%)
four or five	26 (18.8%)
three	15 (10.9%)
two	13 (9.4%)
one	9 (6.5%)
none	22 (15.9%)

Appendix D contains information on frequencies according to sources of support services, and characteristics and origin of students represented in the classes of teachers interviewed.

The Administrator Group

The selection of the administrator group was based on the random selection of teachers. For each teacher in the sample group, an administrator in the same school was selected. In addition, the superintendent, or his designee (often the director or supervisor of guidance/special education) from central office was surveyed. One hundred and nineteen (96.0%) of the school administrators and 63 (92.6%) of the administrators selected from central office were interviewed.

One hundred forty-one (77.5%) of the administrators were from small urban and rural districts and forty-one (22.5%) from large urban areas.

Appendix D describes the sample of administrators according to zone, urban/rural project status, and source of diagnostic support.

SPECIAL CLASS TEACHERS' ROLE AS A RESOURCE TO OTHER TEACHERS

In varying degrees, special class teachers provide consultative assistance to other teachers. Relative to this consultative role, teachers were asked to rate on five-point scales their perceptions of:

1. the special teachers' willingness to provide assistance to other teachers in diagnosing problems and planning programs;

2. other teachers' willingness to receive service;

3. the frequency of actual service, and

4. the adequacy of actual service.

Ratings were requested for the service areas of behaviour and socio-emotional development, reading, listening, writing, speaking, arithmetic, perception (visual, auditory, tactile) and motor development, follow-up consultation with other teachers, and provision of in-service education for other teachers.

Administrators were asked to rate on five-point scales, their perceptions of special teachers' willingness to provide service, other teachers' willingness to receive service, and the frequency and the adequacy of the actual service.

Both teachers and administrators were asked:

1. Whether, in general, administrators expect special class teachers to provide consultative service to other teachers, and

2. if, in general, the consulting role is facilitated by administrators.

Open-ended comments regarding the special class teacher as a consultant were also solicited from both teachers and administrators.

Results

Special Class Teachers' Willingness to Provide Assistance

Responses to this question were analyzed according to zone, rural-urban-project status, service area, training, experience, position and source of support for diagnosis.

No significant differences were found between geographic regions (zones 1 to 10), between rural-urban-project status, and according to extent of teachers' university preparation in special education and related subjects (Appendix E). Generally, special class teachers are perceived as "willing" to provide services to others, regardless of their rural, urban, or project status or degree of formal training.

Table 30 reports comparisons between service areas. Most willingness is expressed for follow-up consultation and reading and least in arithmetic.

Table 30

Willingness to Provide Assistance According to Service Area

Service Area	$\bar{X}$	SD
Reading	4.60	0.78
Listening	4.26	0.92
Writing	4.19	1.00
Speaking	4.14	1.05
Arithmetic	3.94	1.25
Behaviour and Social-Emotional Dev.	4.38	0.86
Perception and Motor Development	4.18	1.00
Follow-up Consultation with Others	4.62	0.61
Providing In-Service Education	4.22	0.96

(Scale: 1 - Very unwilling, 2 - Unwilling, 3 - Sometimes Willing, Sometimes Unwilling, 4 - Willing, 5 - Very Willing)
Note: ($\bar{X}$ - mean or average of the scores; SD-standard deviation or amount of variability in distribution of scores)

Whereas source of support for diagnosis and special education teaching experience were not related to the special class teachers' degree of willingness to assist other teachers, teaching position and total teaching experience were related. As shown by Tables 31 and 32, teachers of segregated special classes are least willing to provide service to other teachers ("sometimes willing, sometimes unwilling") as compared to teachers in resource rooms, in learning assistance centers, and itinerant teachers (rated between "willing" and "very willing"). Teachers with one year or less of total teaching experience were less willing to assist others than teachers with five or more years of experience.

Table 31

Willingness to Provide Assistance According to Teaching Position

Teaching Position	N	$\bar{X}$	SD
Itinerant	6	41.0	4.56
Resource Room	107	36.7	7.89
Segregated Special	16	29.2	15.0
Learning Assistance Centre	8	39.0	5.56

Table 32

Willingness to Provide Assistance According to Total Teaching Experience

Total Teaching Experience	N	$\bar{X}$	SD
5 years or more	89	36.1	9.31
2 to 4 years	34	35.2	11.16
1 year or less	15	25.7	5.21

Special Class Teachers' Perceptions of Other Teachers' Willingness to Receive Service

Responses to this question were analyzed according to zone, rural-urban-project status, service area, training, experience, position and source of support for diagnosis.

No significant differences were found between geographic regions (zones 1 to 10), between rural-urban-project status, between service areas, according to extent of teachers' university preparation in special education and related subjects, according to teachers' special education teaching experience, and according to source of support for diagnosis (Appendix F).

When responses were averaged, the rating approached "willing" on the scale.

Table 33 reports comparisons between teaching position. Regular class teachers were most willing to receive service from special class teachers of resource rooms.

Table 33
Special Class Teachers' Perceptions of Other Teachers' Willingness to Receive Service: Comparisons of Means (Averages) According to Teaching Position

Teaching Position	N	X	SD
Itinerant	6	29.83	6.27
Resource Room	107	32.42	7.62
Segregated Special	16	22.94	14.41
Learning Assistance Centre	8	27.25	9.79

(Scales for tables 31, 32 and 33: 9 - Very Unwilling, 18 - Unwilling, 27 - Sometimes Willing, Sometimes Unwilling, 36 - Willing, 45 - Very Willing)

Frequency of Special Class Teachers' Assistance to Other Teachers

Responses to this question were analyzed according to zone, rural-urban-project status, service area, training, experience, position and source of support for diagnosis.

No significant differences were found between geographic regions (zones 1 to 10), between rural-urban-project status, according to extent of teachers' university preparation in special education and related sub jects, and according to total years of teaching experience (Appendix G).

When responses are averaged, special class teachers report that they provide consultative services to other teachers "sometimes."

Table 34 reports comparisons between service areas. Most frequent activities reported by special teachers in service to others are in the areas of language arts. Arithmetic, and perceptual-motor development service occur less frequently. Most infrequent are inservice activites.

Table 34

Frequency of Assistance According to Service Area

Service Area	$\bar{X}$	SD
Reading	3.48	1.22
Listening	2.76	1.22
Writing	2.84	1.78
Speaking	2.80	1.28
Arithmetic	2.72	1.25
Behaviour & Social Emotional Dev.	3.10	1.12
Perception & Motor Development	2.86	1.19
Follow-up Consultation with others	3.73	1.01
Providing In-Service Education	2.11	1.18

(Scale: 1 - Very Infrequent, 2 - Infrequent, 3 - Sometimes, 4 -Frequent, 5 - Very Frequent)

Table 34 indicates that the average frequencies of service reported by itinerant resource teachers are significantly higher than the contacts reported by teachers in learning assistance centres and teachers in segregated special classes.

Table 35

Frequency of Assistance According to Teaching Positon

Teaching Position	N	$\bar{X}$	SD
Itinerant	6	31.7	10.25
Resource Room	107	23.8	8.22
Segreated Special	16	17.5	12.04
Learning Assistance Centre	8	22.8	7.48

Teachers in school systems contracting for diagnostic service report significantly fewer contacts with other teachers than those in school systems (Table 36).

Table 36

Frequency of Assistance According to Source of Support for Diagnosis

Source of Support for Diagnosis	N	X	SD
School System *	94	29.8	9.17
Contract *	10	22.8	9.22
Contract & School System	11	24.8	7.28
LAC or LAFS** & School System	21	26.3	9.8

As expected, teachers with less than 1 year of special education teaching experience report fewer contacts ("infrequently") than those with more experience (Table 37).

Table 37

Frequency of Assistance According to Special Education Teaching Experience

Special Education Teaching Experience	N	X	SD
5 years or more	29	25.7	9.89
2 - 4 years	47	26.2	9.23
1 year	30	24.6	8.42
less than 1 year	32	19.7	7.66

(Scales used in tables 35, 36, 37: 9 - Never, 18 - Infrequently, 27 - sometimes, 36 - Frequently, 45 - Very Frequently)

Adequacy of Special Class Teachers' Assistance to Other Teachers

Special class teachers' perceptions of their adequacy in providing service to others were analyzed according to rural-urban-project status, service area, training, experience, position, and source of support for diagnosis.

* School System - support service for diagnosis is provided by school system personnel
Contract - service for diagnosis is purchased (contracted)

** LAC - Learning Assistance Centre
LAFS - Learning Assistance Field Service

No significant differences were found between rural-urban-project status, between service areas, according to 1) extent of teachers' university preparation in special education and related subjects, 2) source of support for diagnosis and 3) total teaching experience (Appendix H).

When responses were averaged all groups of special class teachers perceived their service as "sometimes adequate, sometimes inadequate."

Two comparisons showed significant differences. Teachers in segregated classrooms perceived their service to others as less adequate than teachers in resource rooms (Table 38) and teachers with less than one year of teaching experience in special education perceived their service as less adequate than teachers with two to four years experience (Table 39).

Table 38

Adequacy of Assistance According to Teaching Position

Teaching Position	N	$\bar{X}$	SD
Itinerant	6	27.5	9.12
Resource Room	107	26.9	7.38
Segregated Special	16	20.6	8.12
Learning Assistance Centre	8	21.9	7.66

(Scales in tables 38, 39: 9 -Very Inadequate, 18 - Inadequate, 27 - Sometimes Adequate, Sometimes Inadequate, 36 - Adequate, 45 - Very Adequate)

Table 39

Adequacy of Assistance According to Special Education Teaching Experience

Special Education Teaching Experience	N	$\bar{X}$	SD
5 years or more	29	27.0	9.44
2 to 4 years	47	27.3	9.33
1 year	30	26.3	8.73
less than 1 year	32	22.8	8.62

Special class teachers' perceptions of their adequacy were also analyzed in relation to tasks in diagnosis, in program planning, in teaching, and in different service areas.

Adequacy in Diagnosis

No significant differences were found in perceptions of adequacy in diagnosing remedial problems when comparisons were made between zones, urban-rural-project status, formal university preparation, teaching position, total teaching experience, and source of diagnostic support (Appendix H).

However, years of special education teaching experience were found to be related to perceptions of adequacy in the area of diagnosis (Table 40).

Table 40

Adequacy of Diagnosis According to Special Education Teaching Experience

Special Education Teaching Experience	N	$\bar{X}$	SD
5 years or more	29	14.8	5.04
2 to 4 years	47	15.6	5.05
1 year	30	17.2	3.30
less than 1 year	32	13.8	4.45

When responses were averaged, special class teachers tended to perceive themselves as "sometimes adequate, sometimes inadequate" in diagnosing remedial problems.

Adequacy in Program Planning

No significant differences were found in self-perceptions of adequacy relative to planning remedial programs when comparisons were made between zones, between rural-urban-project status, related to formal university preparation, teaching position, total teaching experience and source of support for diagnosis (Appendix H).

The only difference (Table 41) was that those with less than one year of teaching experience in special education felt less adequate in program planning than teacher groups with one year or five or more years experience.

Table 41

Adequacy in Program Planning According to Special Education Teaching Experience

Special Education Teaching Experience	N	$\bar{X}$	SD
5 years or more	29	16.5	4.16
2 to 4 years	47	16.0	4.38
1 year	30	17.9	3.92
less than 1 year	32	14.6	4.47

All groups of special class teachers generally tended to perceive themselves as "sometimes adequate, sometimes inadequate" in program planning.

Adequacy in Teaching

No significant differences were found in self perceptions of adequacy about teaching between teachers in the various zones, between rural, urban and project groups, resulting from formal preparation, teaching position, total teaching experience, source of support for diagnosis, special education experience or total teaching experience (Appendix H).

All groups of special education teachers, when responses were averaged, tended to perceive their teaching as "sometimes adequate, sometimes inadequate."

Special Class Teachers' Perceptions of Administrators as Facilitative or Non-Facilitative of Their Consultant Role

Special class teachers' perceptions of the various aspects of their service to other teachers were analyzed according to whether or not they rated their administrators as facilitative or non-facilitative.

Significant differences in the special class teachers' willingness to provide service, in their perceptions of other teachers' willingness to receive service, and in the frequency and adequacy of the service were found according to whether administrators were perceived as being facilitative or non-facilitative (Table 42).

Where administrators were perceived as being facilitative, special class teachers rated themselves as willing to provide service and perceived other teachers as slightly more willing to receive service. They rated the frequency of their service as "sometimes" (3, on a 5 point scale) and perceived the service as being "sometimes adequate, sometimes inadequate."

Where administrators were perceived as being non-facilitative, special class teachers' ratings of their willingness to provide service were significantly lower (although still approached "willing" on the scale). They perceived other teachers as being sometimes willing, sometimes unwilling to receive service. They indicated that such service occurred infrequently, and their perceptions of its adequacy approached "sometimes adequate, sometimes inadequate" on the scale.

Table 42
Special Class Teachers' Perceptions of Their Role as Resource Workers According to Perceptions About Their Administrators

	Administrators Perceived as Facilitative N = 78		Administrators Perceived as Non-Facilitative N = 60	
	$\bar{X}$	SD	$\bar{X}$	SD
Willingness to Provide Service	37.36	6.19	33.85	12.20
Other Teachers Willingness to Receive Service	32.82	7.02	28.47	11.97
Frequency of Service	26.72	7.67	20.97	9.89
Adequacy of Service	28.14	7.35	23.10	10.45

Administrators' Perceptions of the Special Class Teachers' Role in Assisting Other Teachers

Administrators were asked to rate themselves as being facilitative or non-facilitative with respect to the special teachers' role as a resource to other teachers. A biserial correlation coefficient was computed to ascertain the degree of relationship between administrators' views of self as generally facilitative versus generally non-facilitative and a composite index of their perceptions of the helping role for special class teachers (including, special class teachers' willingness to provide service, regular teachers' willingness to receive service, frequency and adequacy of service). A moderate relationship (r bis=.69) was established.

However, when single aspects of service are compared, there were not significant differences between the two groups of administrators in their ratings. Both groups of administrators perceived the special class teachers as approaching "willing" to provide service, the regular teachers as approaching "willing" to receive service, the frequency as "sometimes" and the adequacy of service as approaching "adequate" (Appendix I).

Similarly, no significant differences were found between groups categorized according to source of diagnostic services (Appendix I).

When school and central office-based administrators' perceptions were analyzed according to urban-rural-project status (Table 43) it was found that central office administrators in the LAFS* region differed significantly from their school administrators on the ratings of frequency. Central office based administrators judged service to occur less frequently. Also school administrators rated regular teachers as being significantly more willing to receive service than did the central office administrators.

Table 43

Administrators' Perceptions of Special Class Teachers' Role According to Urban-Rural-Project Status

Aspect of Service to Others		Zone Clusters									
		LAC		Small Urban and Rural		Large Urban		LAC and LAFS		LAFS	
		S*	C*	S	C	S	C	S	C	S	C
	N	11	8	83	58	36	5	19	14	10	7
Special teachers willingness to provide service	X	4.44	4.43	4.28	4.17	4.03	4.60	4.19	4.23	4.00	4.14
	SD	0.73	0.53	1.19	1.01	1.23	0.55	0.11	0.60	1.41	0.69
Other teachers willingness to receive serv.	X	3.78	3.43	3.89	3.48	3.97	3.80	3.81	3.46	3.75	3.43
	SD	0.67	0.53	0.93	0.67	0.94	0.84	1.05	0.52	1.39	0.53
Frequency of service	X	3.33	3.57	3.29	3.43	3.53	3.80	3.63	3.15	3.88	2.86
	SD	1.00	0.79	0.93	0.84	0.90	0.45	0.81	0.80	0.34	0.69
Adequacy of service	X	3.44	3.43	3.76	3.70	3.76	3.60	3.75	3.54	4.13	3.57
	SD	0.53	0.79	0.95	0.77	0.87	0.55	0.78	0.78	0.83	0.79

*S - School based *C - Central Office Based

Comparison of Special Teachers' and Administrators' Perceptions of Special Teachers' Role

From Table 44, it is evident that administrators were consistently more supportive of the special teachers' role as resource persons than were the special teachers (higher mean values for administrators). This was especially true for adequacy of service. Administrators rated service as "adequate" whereas special teachers rated service as only "sometimes adequate," "sometimes inadequate."

Table 44
Comparison of Special Teachers' and Administrators' Perceptions of Special Teachers' Role

	Total Teachers' Perceptions (138) $\bar{X}$	Total Administrators' Perceptions (182) $\bar{X}$
Special Teachers' Willingness to provide Assistance	3.96	4.20
Other Teachers' Willingness to Receive Assistance	3.40	3.77
Frequency of Assistance	2.65	3.45
Adequacy of Assistance	2.85	3.74

Open-Ended Comments by Teachers

Additional support for the findings reported in the preceding sections is provided by the comments made by special class teachers concerning their role in assisting others (Appendix J).

"Special education teacher is willing, but time is lacking for consultation with other teachers. Time should be programmed." While this was the most prevalent comment (29 responses), some teachers feel that what is needed is more give-and-take on a personal, informal level to prevent a threat to the regular teachers (5 responses). While several teachers (11 responses) see the need for a resource teacher who serves as a consultant to other teachers (the consultant role being an integral part of the program), others stress the need for caution on the part of the special class teacher in offering advice and suggestions, once again because the regular teachers may view this as a criticism of their methods (4 responses). A number of special class teachers (6 responses) feel that regular teachers do not understand the purpose of the resource room.

Open-ended comments indirectly provided teachers with an opportunity to express any negative views they might have regarding integration and the consulting role for special education teachers. It is note-worthy that not one negative attitude was expressed.

Open-Ended Comments by Administrators

Again, although given the opportunity, not one administrator expressed a negative attitude concerning the consulting role of the special class teacher or the integration of handicapped children in regular classes. Administrators also stressed that "more time is needed in order for consultative services to be provided by the special education teacher" (21 responses). They also pointed out that special class teachers often provide consultative services on their own time (18 responses). The resource room was thought to be helpful particularly in the case of children with learning disabilities (7 responses).

The general trend of the open-ended comments by administrators is that there is a gradual increase in the acceptance, the frequency, and the adequacy of the special class teachers' consulting role (Appendix J).

Summary

The findings of the study with regard to special class teachers' role as a resource to other teachers can be summarized as follows (Table 45 summarizes further 5 - 11 below):

1. Generally, special education teachers report themselves as "willing" to serve in a resource or consultative capacity in assisting regular teachers. The administrators concur with this perception.

2. Special education teachers and their administrators rate other teachers' willingness to receive assistance between "sometimes willing, sometimes unwilling" to "willing".

3. The average perception by special class teachers and their administrators about the frequency of the service to others is "sometimes".

4. Special education teachers and their administrators rate the adequacy of the service to others between "sometimes willing, sometimes unwilling" to "willing".

5. Total teaching experience, teaching position, and service area are significantly related to the special class teachers' willingness to provide service.

6. Teaching position and total teaching experience are significantly related to the special class teachers' perceptions of other teachers' willingness to receive service.

7. Special education teaching experience, teaching position, service area and source of diagnostic support are significantly related to the perceived frequency of service.

8. Special education teaching experience and teaching position are significantly related to the perceived adequacy of service.

9. Zone, rural-urban-project status and university preparation in special education and related subject areas are not significantly related to the special class teachers' willingness to provide service to other teachers, the frequency or the adequacy of service.

10. Special education teaching experience is significantly related to special class teachers' self perceptions of adequacy in program planning and diagnosis but not in teaching.

11. Zone, rural-urban-project status, university preparation in special education and related subject areas, total teaching experience, teaching position and source of diagnostic support are unrelated to special class teachers' perceptions of their adequacy in program planning, diagnosis and teaching.

Table 45

Summary Indicating Statistically Significant and Nonsignificant Differences Between Groups ** of Special Teachers: Comparison by Aspects of Service to Other Teachers

Aspects of Service To Others	Variables Used to Categorize Special Teachers: Zone	Rural-Urban Project Status	University Preparation	Total Teaching Experience	Spec. Ed. Teaching Experience	Teaching Position	Service Area	Source of Diagnostic Support
Special Teachers' willingness to provide service	NS	NS	NS	*	NS	*	*	NS
Other Teachers' willingness to receive service	NS	NS	NS	*	NS	*	NS	NS
Frequency of Service	NS	NS	NS	NS	*	*	*	*
Adequacy of Service	NS	NS	NS	NS	*	*	NS	NS
Special Teachers' Adequacy in :Program Planning	NS	NS	NS	NS	*	NS	■	NS
:Diagnosis	NS	NS	NS	NS	*	NS	■	NS
:Teaching	NS	NS	NS	NS	NS	NS	■	NS

** Groups - Within each major category (e.g. Teaching Position) special teachers are designated into specific groups.

* Differences between two or more groups are statistically significant.

NS Differences between two or more groups are not statistically significant.

■ No comparisons made.

RECOMMENDATIONS

Organization for Instruction

Questions:

(a) What are the relative merits of resource rooms, segregated special classes and regular classrooms in achieving the objectives of remedial instruction?

(b) What types of students seem best served in each setting?

(c) What are the implications of the findings for Alberta Education relative to leadership, regulations and funding?

Results: The comparisons analyzed from the studies elsewhere and from the central Alberta study indicated:

(a) That in the majority of instances there were no significant differences.
(b) Regular class teachers, with appropriate orientation and support, were able to meet the needs of the moderately handicapped as well as those teachers instructing in partially segregated or totally segregated settings. More frequently, the results for learning disabled students favored some degree of segregation (e.g. the resource room).

Since the results of the efficacy studies were mixed, and since many of the studies were necessarily lacking in the experimental rigour required for unequivocal conclusions -

Recommendation 1

IT IS RECOMMENDED THAT THE EXISTING TYPE B SPECIAL EDUCATION TEACHER POSITION GRANT REQUIREMENTS BE RETAINED AND THAT THE FUNDS CONTINUE TO BE ACCESSED, AT THE OPTION OF SCHOOL SYSTEMS, FOR USE AS AT PRESENT.

Sufficient evidence exists from the review of the literature and from the central Alberta study which compared resource rooms with regular classrooms to provide the basis for a supplementary recommendation.

Recommendation 11

IT IS RECOMMENDED THAT THE REQUIREMENTS FOR TYPE B SPECIAL EDUCATION TEACHER POSITION GRANTS BE EXPANDED TO PERMIT THE OPTION BY SCHOOL SYSTEMS TO ACCESS THE FUND FOR THE EMPLOYMENT OF SPECIAL CLASS TEACHERS TO FUNCTION A GREATER PORTION OF TIME (PERHAPS FULL-TIME) AS A RESOURCE TO REGULAR TEACHERS. HOWEVER, IT IS FURTHER RECOMMENDED THAT THIS OPTION BE SUBJECT TO THE FOLLOWING CONDITIONS:

i. THAT THE REQUISITE NUMBERS OF MODERATELY HANDICAPPED PUPILS BE IDENTIFIED AND PLACED ON INDIVIDUALIZED PROGRAMS IN REGULAR CLASSES.

ii. THAT THE PRESENT REQUIREMENTS BE RETAINED WITH RESPECT TO THE NUMBER OF PUPILS FOR EACH FULL-TIME EQUIVALENT SPECIAL EDUCATION TEACHER TYPE B POSITION (CONSULTANT-TEACHER POSITION).

iii. THAT THE PUPILS BE SELECTED AND PLACED IN REGULAR CLASS ACCORDING TO EXISTING CRITERIA FOR SPECIAL CLASS INCLUDING INDIVIDUAL EVALUATIONS BY COMPETENT PROFESSIONALS.

iv. THAT THE POSITIONS REFERRED TO IN (ii) BE STAFFED WITH RESOURCE TEACHERS TO SUPPORT THE REGULAR STAFF TEACHERS IN THEIR REMEDIAL INSTRUCTION OF ONLY THOSE PUPILS IDENTIFIED ACCORDING TO (iii).

RECOMMENDATIONS

Support Services to Regular Class Teachers by Special Class Teachers

Questions: In varying degrees, special class teachers provide consultative assistance to other teachers. Relative to this resource role for each of a number of areas of disability:

(a) How willing is the special class teacher to provide service?

(b) How willing is the regular class teacher to receive service (as perceived by special teachers and administrators)?

(c) How frequent is the service?

(d) How adequate is the service?

Results: The findings were based on structured interviews of a random sample of special class teachers and their administrators conducted on-site during June 1976. The general findings were as follows:

(a) Special class teachers and their administrators reported an average response as "willing" to provide the service.

(b) They viewed regular class teachers as averaging midway between "sometimes willing" and "willing" to receive the service.

(c) Both groups perceived the service at present occurring "infrequently" to "sometimes".

(d) Administrators' and special class teachers' average rating of the adequacy of this current support service was "sometimes adequate, sometimes inadequate" which was at the midpoint of the five-point scale used.

The open-ended portions of the interviews revealed: total support of this role for special class teachers (not one respondent expressed dissent); and support for the notion that moderately handicapped pupils might be provided assistance in regular class (this was not asked directly of the respondents; however, no dissenters were found to the many questions posed concerning helping regular class teachers improve their remediation efforts).

Based on these findings from the on-site interviews, and review of related literature, in order to facilitate school systems' implementation of this option-

Recommendations III, IV, V and VI

IT IS FURTHER RECOMMENDED THAT ALBERTA SCHOOL SYSTEMS IN CONSULTATION WITH ALBERTA EDUCATION,

III. DEVELOP GUIDLINES, JOB DESCRIPTIONS AND ROLE EXPECTATIONS FOR THIS SUPPORT SERVICE.

IV. PROVIDE ORIENTATION TO TEACHERS AND ADMINISTRATORS.

V. IMPLEMENT THE NECESSARY TEACHER INSERVICE PROGRAMS.

FINALLY, IT IS RECOMMENDED THAT ALBERTA EDUCATION

VI. RECOMMEND TO THE FACULTIES OF EDUCATION IN ALBERTA UNIVERSITIES CONSIDERATION OF PROVIDING PRESERVICE PROGRAMS CONCERNING THIS SUPPORT ROLE FOR SPECIAL EDUCATION TEACHERS.

Implications of The Findings And Recommendations For Alberta Education

The findings from 1) the review of the literature on the effectiveness of regular class placement and 2) the on-site interviews of special education teachers and their administrators support the recommendation that, at the option of the local school system, the provincial Special Education Teacher Position (SETP) grant be used to fund a consultant role for special class teachers. This redeployment would have the special education teacher functioning as a resource to regular class teachers in a particular school. The service to regular class teachers would be with respect to those children enrolled in the regular class who were documented (by means of appropriate individual testing by qualified professionals) as handicapped for the purposes of the grant.

The service could include the following:

1. periodic academic diagnosis,
2. program plans including preparation and selection of appropriate instructional materials,
3. frequent evaluation of student progress and consultation with outside agencies, parents and school staff, and
4. inservice training of regular class teachers

One implication from the recommendation is that local and provincial leadership are required to implement. In order to provide information to assist in implementing a review of the literature was undertaken in a number of related areas. These areas were as follows: follow-up studies of the long-term effects of remediation, changing roles and expectations under an integration model for special education, preparation of consulting teachers, gaining and maintaining the cooperation of the regular class teacher, training the regular teacher, and enlisting administrator support.

The next sections summarize findings and conclusions based on the literature review. The first section reported is the long-term effect of remediation. An implication of one conclusion from this longitudinal research is that regular teachers must be better prepared to maintain the benefits from remediation enjoyed by students who are returning from remedial settings.

Too often, the improvements from remedial instruction disappear when the student returns to mainstream instruction. An alternative which might ameliorate this is to have the regular class teachers assume responsibility for direct remedial instruction in the first instance for moderately handicapped pupils.

The first review in the next section is concerned in a peripheral way with answers to these questions: How important is the regular class teacher in maintaining any benefits from remediation programs? To what degree have regular teachers been successful?

LITERATURE REVIEW -

: FOLLOW-UP STUDIES
: CHANGING ROLES AND EXPECTATIONS UNDER AN INTEGRATION MODEL FOR SPECIAL EDUCATION
: PREPARATION OF CONSULTING TEACHERS
: GAINING AND MAINTAINING THE COOPERATION OF THE REGULAR TEACHER
: TRAINING THE REGULAR TEACHER
: ENLISTING ADMINISTRATOR SUPPORT

Follow-up Studies

The review of the literature concerning the long-term effects of remediation was not as extensive as the reviews on the efficacy of special classes and regular class. The constraints on the designs and the data available for follow-up studies are such that less rigour was apparent for most studies in the methodologies used. Accordingly, the conclusions enumerated below must be viewed as tentative.

In The Area Of Reading

1. The prognosis for reading disabled children who have the benefits of high mental ability, culturally advantaged background, early intervention, and who suffer from a mild disability is optimistic in terms of academic, social or occupational achievement. (Rawson, 1968; Robinson and Smith, 1962; and Balow and Blomquist, 1965, who express guarded optimism).

2. The prognosis for children suffering from severe reading disability and coming from lower or lower-middle class backgrounds is poor.

3. Reading disabilities may be ameliorated by short, intensive remediation treatments but continued growth is dependent upon continuing support. (Balow, 1965).

4. Reading disability is generally long-term, chronic and not totally overcome by maturation (Silver and Hagin, 1963, 1964; Forell, 1976). The expectation is not realistic that a large proportion of severely disabled readers "can catch up" with their age-mates when typical short-term remediation arrangements are used.

5. Two related British studies provided conclusions that whatever grouping arrangements are used (special class vs. regular and individual vs. small-group) the results are the same: no significant differences in the long-term effects. In all groups compared the reading quotients declined after emediation ended, (Lovell et al, 1962; 1963).

6. A study based on achievement test results was undertaken by Bienert (1977) in an Alberta setting. An analysis of the follow-up results from a three-year remedial program revealed no differences between the treatment and a comparison group according to the Canadian Test of Basic Skills (CTBS) reading scores. One year after the remedial program ended the differences which had favored the remedial group during remediation were eliminated.

   However, when Bienert analyzed the follow-up scores from a criterion-referenced test which more closely matched the remediation curriculum, he found results favoring the remediation group in one-third of the comparisons: One year after the program ended 1) grade 7 students initially classified as low achievers scored higher than the comparison group and 2) grade 6 students originally categorized as high achievers scored higher than their counterparts. Two-thirds of the comparisons using the curriculum valid measure showed no difference.

Silberberg and Silberberg (1969) in an article entitled "Myths in Remedial Education" reference studies where the average rates at the time of the follow-up evaluations had regressed to the pre-remediation levels. Thus the Silberbergs argued that one of the myths of remedial education--that long-term benefits are normal and to be expected--was not borne out by the evidence from follow-up studies.

In The Areas Of Mental Retardation And Emotional Disturbance

1. Careful selection and preparation of special education students for re-entry to regular classes are necessary to ensure that the effects of remediation carry over (Cormany, 1970; Haring and Krug, 1975). (The study by Haring and Krug was carefully controlled by random assignment of EMH children to the preparation program and to the control group).

2. Emotionally disturbed children do not show the benefits of special class intervention when they are followed up after re-entry in regular classes (Vaac, 1972).

The Vaac investigation involved a comparison of special class and regular class for remediation. None of the differences between the groups were significant on long-term follow-up measures; the early benefits enjoyed by the experimental group had dissipated over time.

Implications Of The Findings From Follow-Up Studies

The poor prognosis relative to the lasting benefits from remedial instruction implies that the regular class teacher may be the crucial factor in improving results. At the very least, the regular teacher who receives graduates from remedial programs requires support in order to maintain the improved rate of development. Students, too, need to be prepared for re-entry. At the most, the regular class teacher might assume front line responsibility for the direct instruction aspect of the remediation task. Here again, substantial and continuous support would be required. Over time a large cadre of regular class teachers with experience and enhanced competencies in remediation could be developed to meet the needs of moderately handicapped pupils.

However, if greater numbers of mildly handicapped pupils are to be considered for retention in regular class groups, further examination of this arrangement is warranted. The next sections of the report examine findings from the literature concerning regular class teachers assuming greater responsibilities for remedial teaching, but with support provided by special class teachers in the same school.

Changing Roles and Expectations Under an Integration Model for Special Education

Growing dissatisfaction with the segregation model for special education has resulted in a trend toward the integration of handicapped students into the regular classroom. This trend has necessitated a reappraisal of the role of the special class teacher.

As an alternative to the segregated classroom, Dunn (1968) proposed a two-level scheme. The first level is a "Special Education Diagnostic and Prescriptive Centre" located within a school district or shared by a group of small school districts. Its purpose would be to provide short term intensive diagnostic teaching for referred children with the intention of returning the learner to the regular classroom with a tested individual prescription for learning. The second level of intervention involves resource teachers located in the school who would serve all children with learning problems regardless of whether or not they had been labelled as handicapped.

The concept of resource teachers located within the school has gained interest over the past several years. Different roles for the resource teacher have been proposed and the following discussion examines some of the more prominent of these.

Stearns and Swenson (1973) identify four types of resource programs for mildly handicapped students. These are the block scheduled resource room, the tutorial resource room, the "core class plus" resource room and the learning development teacher. The block scheduled resource room takes handicapped children from the regular age appropriate classroom for regular blocks of time on a daily basis. During these periods the resource teacher provides special instruction in the deficiency areas (usually mathematics and reading). The tutorial classroom removes the student from the regular class for short periods of highly specific tutoring. Referral for this program tends to be on an informal basis between the resource teacher and the classroom teacher. This arrangement tends to promote earlier remediation of learning problems. However, the tutorial classroom is costly and requires a resource teacher with an exceptional range of knowledge. The "core class plus" program probably does not qualify as a significant change from the segregated classroom. Handicapped students are assigned to a continuing special class with a resource teacher and may be released to regular subjects teachers (e.g. music, physical education) as indicated. In addition, to the core class, the resource teacher also provides specialized instruction to referred learning handicapped students. Stearns and Swenson (1973) have listed specific disadvantages to the three models described above. However, the most serious deficiency identified is shared by all three.

That is, none of the models provide for staff development. As agreed by the authors, the consultant role of the special teacher in developing the regular teachers' skills in handling the handicapped students' problems is of critical importance. With this in mind, the fourth and preferred model was described. The learning development teacher concept provides a comprehensive and flexible role for the resource teacher. As described by Stearns and Swenson (1973), the concept is similar to the role described for the clinical educator and resource teacher by Dunn (1968). The learning development teacher concept was formulated by Swenson (as cited in Stearns and Swenson, 1973) in 1968 and thereafter implemented in Indiana public schools. The learning development teacher is both a specialist in teaching and the diagnosis of learning problems. This person's responsibility is to organize the special training of the handicapped child so as to keep him/her maximally involved in the regular school program. Five levels of intervention are conceived in this role - consultant, teacher-aide, resource teacher, intensive learning adjustment teacher and diagnostic referral agent. Advantages stated for this model are: flexibility in scheduling, flexibility in priorizing, flexibility in operationalization and the interrelation between the special teacher and regular teacher. Stearns and Swenson (1973) view the consultant role as most desirable.

The consultant role for special education teachers had been discussed by a number of writers (e.g. McKenzie et al, 1970; Lilly, 1971; Martin, 1972). This role is similar to that of the resource teacher (Dunn, 1968) or the learning and development teacher (Stearns and Swenson, 1973). However, the consulting teacher role differs from that of the resource teacher in that the former do not have direct classroom teaching responsibilities. Diagnosis and remediation are accomplished by the handicapped person's regular teacher with the assistance of the consulting teacher.

According to Perelman and Fox (1974) the general role of the consulting teacher is to provide services to handicapped children within regular classrooms through the training of classroom teachers, school administrators, and parents. Christie et al (1972) define the consulting teacher's role more specifically as individualizing instruction, analyzing behaviour, research, and consultation/training for other teachers. The democratic nature of the consultant role is emphasized by Blessing (1968). He views the consultant as a specialist who is primarily concerned with program growth, feedback information, and changes such as the introduction of new methods or techniques, expansion of services, innovative methods of grouping, improvement of curriculum and initiation of research projects.

Deno (1970) proposed that decision-making responsibilities for selection, placement, and programming for all children should be assigned to the special education teacher. This was favoured because it recognizes the teacher as a key member of the education system. However, she questions the willingness and competency of special class teachers to undertake such a high degree of responsibility. Iano (1972) and

Lilly (1975) carry Deon's proposal further and suggest that decisions on selection, placement, and programming for all children in a school be made cooperatively by regular and special education teachers. Lilly (1975) also presents an extensive list of teacher competencies necessary for successful mainstreaming. He stresses both the importance of classroom teachers seeking advice and help with problems from resource persons in the school, and the value of expecting such help for the teachers as well as the child.

Two studies have attempted to determine the efficacy of resource programs which focused on cooperation between the special class and regular class teachers. Barksdale and Atkinson (1971) evaluated a resource room plan for instructing educable retarded children. The program involved the special and regular classroom teachers in cooperative planning, the use of diagnostic tools, teaching methods and materials, and continuous assessment procedures. A continuous in-service program for regular classroom teachers and other school personnel was provided. The project was initiated in two over-crowded elementary schools, one located in the inner city and the other in a middle-class neighbourhood. Post-test results on the Metropolitan Achievement Battery indicated significant academic improvement. A three year follow-up showed ten of the original 64 pupils were progressing in the regular class without resource room teacher services or support. In addition, principals, teachers, and parents reported noticeable changes in the pupils' attitudes toward themselves, their teachers and peers, and the schools in general. The author concluded that parental enthusiasm, lack of stigma attached to labeling, improvement in self-concept, in-service training for regular class teachers, and the wise use of supportive personnel all support this model as a viable alternate means of providing special education for a large number of handicapped children.

Affleck et al (1973) examined a resource school model organized to provide instructional service to mildly handicapped children through specification of goals and administrative processes, data collection and analysis. The model was also intended to be transportable and provide a superior practicum facility for college special education students wishing to become resource teachers. Program emphasis was on a team approach. The resource teacher assumed the primary responsibility of processing referrals, individual diagnosis, program planning, evaluation, and preparing, presenting, and filing reports for all special education students. The resource teacher was also involved in some team teaching as well as planning and material preparation. Regular class teachers were primarily responsible for instruction. Three undergraduates did their practice teaching in the school and six post-graduate interns participated in materials preparation, diagnosis, evaluation and instruction. An entire elementary school with a total of 99 children (48 special education pupils and 51 previous resource room referrals) was converted into a resource school under the model. Of the 48 handicapped students referred for full-time placement in special education, 3 were totally re-integrated into regular classrooms, and 3 were re-integrated for a minimum of seventy-five percent of the school day. An additional 4 students were removed from special education rolls and were scheduled for regular classroom placements during the next school year. Of the 51 previous resource room referrals, 14 met the predetermined criteria for

return to the regular classroom and were returned on a full-time basis. At the closing of the school year, an additional 24 students were assigned full-time regular grade placement for the next school year. Extension of the resource concept led to significant increases in reading performance for the handicapped children.

Other observations were reported.

1. Through flexible scheduling a large number of non-handicapped students with deficits in academic skills were successfully served, indicating a preventative aspect to the program.

2. Within the framework of the resource school, categorical labels were eliminated and the stigma of special education placement was greatly reduced.

3. Many problems in program administration were eliminated. Responsibilities and authority were delegated specifically, leading to efficient program implementation and better use of program funds.

4. The resource school model, with its flexible scheduling system, readily incorporated student teachers and interns. Preparing special education teachers with a commitment to the education of all children is a possible by-product of this model.

5. The helping role by the resource teacher apparently was accepted by their regular class colleagues.

Preparation of Consulting Teachers

The Alberta interview study shows special education teachers are generally quite willing to assume a consulting role. Although formal university training in special education is not significantly related to the special teachers' perceived willingness to provide service or frequency and adequacy of this service, experts agree that equipping consulting teachers to assist other teachers in the education and management of handicapped children in the regular classroom is a logical first step in the effective implementation of this role.

McKenzie et al (1970), Christie et al (1972) and Perelman and Fox (1974) have described a two-year training program at the University of Vermont where prospective consulting teachers learn the principles of applied behaviour analysis, measurement, individualizing instruction and deriving minimum objectives in the areas of language, arithmetic and social behaviour. Since the consulting teacher role is a teacher training based model of special education (Lilly, 1971), the special teacher must also possess skills for training other teachers and school personnel. The consulting teacher should be capable of providing three levels of training to regular teachers: consultation, workshops, and formal courses. The first level is accomplished through consulting undertaken with a teacher who has referred a child to the consulting teacher. Workshops add systematic instruction in behaviour analysis. Formal accredited courses offered by consulting teachers, emphasize further the analysis of behaviour and individualization of instruction.

Gaining and Maintaining the Cooperation of the Regular Teacher

Another major step in the implementation of the consulting role for the special teacher is gaining and maintaining the cooperation of the regular teacher. The Alberta study reveals that both administrators and special teachers perceive the regular teacher as being less willing to receive support than special teachers are to provide it. This may be credited to some insecurity generated by an unfamiliar challenge.

Traditionally the major task of the regular classroom teacher was to identify handicapped children and refer them for assessment (Christie et al, 1972). These students were often segregated in a special class or returned to the regular classroom with a label which justified their substandard achievement. In the consulting system, the referring teacher remains accountable for each child's achievement. This accountability may require a major change in attitude and teaching orientation for many regular teachers.

The importance of adequately preparing the regular teacher has been emphasized by Silberberg and Silberberg (1969). In their review of remedial reading research, they found that beneficial effects almost invariably "washed out" within a short period. This observation prompted the authors to recommend that regular class teachers must be prepared and trained in order that the integration of handicapped children in the regular classroom maintains remedial benefits.

Budoff (1972) has suggested that the lack of long term success for remedial learning may be due to the "amenability" of regular class teachers to accommodate children who have been labelled. Even with well-intentioned teachers who verablly indicate their willingness to work with such children within their classrooms, their attitudes and expectations often work against them.

According to Brickell (1961), substantial and continuing support to teachers is the key to successful innovation. Initially, this support may take the form of intensive training for the regular teacher, either through formal university preparation, in-service training, or a combination thereof. Comments by Brickell on the implementation of innovations in a school system are pertinent to this point.

> New instructional programs can be successfully introduced despite initial apathy or even opposition on the part of a number of teachers...Feelings of inadequacy should be distinguished from outright resistance to change...More new programs have been destroyed by inability than by reluctance... The most successful innovations are those which are accompanied by the most elaborate help to teachers as they begin to provide the new instruction (pp. 25-26).

The attitudes of regular teachers toward the placement of mentally handicapped students in the regular classroom have obvious implications. These has been examined by Sund (1975) and Shotel et al (1972).

Sund (1975) studied regular teachers' attitudes toward the placement of EMH students, abilities of EMH students, general teacher competency to teach the EMH and concessions necessary to maintain EMH students in the regular classroom. The teachers examined represented a considerable variation in formal training and experience. No significant differences were found in the attitudes of teachers categorized according to training, experience and socio-economic levels of their schools. The author did, however, identify and emphasize a nonsignificant trend between number of course hours in special education and attitude towards placement, use of supportive services and confidence in the teachers' adequacy.

Shotel et al (1972) studied the effect of an experimental program for integrating handicapped children into regular classrooms on the attitudes of regular teachers toward these children. Comparisons were made between elementary schools with the integrated programs and other schools using the segregated model. For the EMR student it was found that the experimental teacher expressed greater optimism for regular class placement with resource room support, academic potential and social adjustment before the study than at the end of the study. Estimates of teaching competency for this group significantly increased over the study. Regarding the emotionally disturbed child, a greater proportion of experimental teachers than segregated room teachers favoured integration with resource room support. No difference was found between teacher groups regarding the academic potential and social adjustment of these children. The authors suggested that integration of handicapped children into the regular classrooms could be facilitated through appropriate training in methods and techniques for working with these children and the provision for intensive communication and interaction with the resource room specialist.

Training the Regular Teacher

A number of studies and commentaries have stressed the importance of appropriate training for the regular teacher if the integration of handicapped students into the regular classroom is to be successful (e.g. Budoff, 1972; Shotel et al, 1972). Such training is usually conceived as inservice and/or part of the formal university preparation course work.

Witty (1975) has outlined various issues that are considered important in teacher training for the integration of handicapped children. She recommends that:

1. Shared decision making is a key to viable teacher education programs.

2. Competencies to be developed should be specified during the initial phases of the program.

3. The variability of learners is as important in training teachers as it is for the children whom they are teaching.

4. The teacher's ability in self-evaluation is as important as the evaluations conducted by supervisors and trainers.

5. A variety of field experiences in different settings are essential to deal with children of diverse abilities and backgrounds.

6. Special attention and support should be given to the positive affective behaviour of participants.

7. Instructional leadership in the program should be shared by a variety of persons.

8. Emphasis should be placed on the development of diagnostic and prescriptive teaching skills.

9. Trainees should be given opportunities to interact with parents and other professionals in identifying the needs of the children.

Although Witty's suggestions are useful in conceptualizing teacher needs, they are primarily based on opinion. A number of studies have attempted to examine empirically the efficacy of various training programs for teachers.

Shaw and Gillung (1975) studied the efficacy of a college course for regular class teachers of the mildly handicapped. Teacher trainee attitudes were examined toward maintaining handicapped children in regular classes before, upon completion and three months after the course. Compared with teacher trainees who had not elected to take the course, no differences were found in attitudes before the course. Attitude significantly improved in a posttest at the end of the

course and was maintained in the three month follow-up. The authors concluded that relevant skills and attitudes may be promoted in a relatively short period of formal training and that these are maintained after the formal course. It was also concluded that the teaching - learning environment was thus improved and therefore teachers became more confident of their abilities to deal effectively with the mildly handicapped student in a regular class setting.

Grenner (1973) also tested the effectiveness of a program for the preparation of regular classroom teachers for handicapped students. Twenty-two inner city elementary teachers were instructed in a classroom management system during a six-week summer session. Five of the teachers also received classroom assistance from other persons trained in the system. In classroom application the prescribed system promoted less off-task behaviours over all six weeks of the study. Average frequency of teacher approval for approximate behaviours was higher over all six weeks using the system. All teachers who received classroom assistance achieved the program goals and all teachers who received only the seminar reported the assistance program to be of significant value. Ninety percent of the teachers were utilizing one or more components of the system. The author concluded that providing assistance to teachers for the implementation of classroom management techniques is more effective than seminar training alone and that learning theory based strategies are effective and practical for the regular classroom setting.

A Lombardi (1972) study developed and evaluated a preservice and in-service education program to assist teachers, administrators, parents and teacher aides to incorporate the special student into the regular classroom. A group of two administrators, 13 regular class teachers, seven special class teachers, three teacher aides and three university students participated in an intensive summer practice and experience program organized around a summer camp for exceptional children. Regular university summer session students served as a comparison group. No significant difference was found in attitudes between the groups before the program as measured by the Minnesota Teacher Attitude Inventory (MTAI). On the Personnel Orientational Inventory (POI) the program group was significantly more "inner-directed." After the program the experimental group moved toward a more democratic teaching philosophy and attitude (MTAI) which was not maintained on a follow-up test. On a POI post-test, the experimental group showed an increased "inner-directedness" which was maintained on a follow-up test - indicating an increased tendency to "live in the present rather than the past or future." Lombardi (1972) concluded that:

1. summer camp programs for exceptional children may be used as an effective learning milieu for educators and administrators seeking attitudinal change and skill development in working with exceptional children,

2. the utilization of human and resource linkages is important to effecting meaningful changes for the exceptional child,

3. human development instruction (sensitivity training) should be considered an important aspect for altering our educator's communication technique,

4. the education of the mildly handicapped child in the regular classroom is best achieved after a readiness program is implemented by the teacher education facilities, schools, and communities, and

5. other educators should receive similar instruction experience if they intend to effectively meet the needs of the exceptional child in the regular classroom.

Inservice training for teachers has been studied by a number of researchers. Yates (1973) examined affective and cognitive changes in regular classroom teachers as a result of a continuing education program regarding handicapped students. Thirty regular classrooms formed the experimental group with another ten being used as a comparison. The experimental group significantly increased in knowledge of special education and were more convinced that students of limited or superior intelligence and those subject to seizures could be successfully integrated into the regular classroom. Carlson and Potter (1972) studied the inservice training of teachers in a rural setting to provide inclass services for exceptional children. A long range goal of the program was to establish a nucleus of regular teachers who could serve as practitioners and resource personnel to other teachers in behavioural engineering, curricular modification and materials selection for handicapped children. Five experienced and five inexperienced teachers served in the study. All subjects were found to change in attitude toward working with exceptional children. A follow-up study one year after the program period showed that the teachers were continuing to use the behaviourally oriented technique in their classrooms. Since rural school districts often lack funds for full-time special education teachers and are often too remote to acquire suitable assistance externally, the authors concluded that the training of existing personnel offers a viable alternative for providing needed services for the handicapped student.

According to the studies reviewed, the training of regular classroom teachers to accept and assist the handicapped student in the regular classroom setting has been successful.

Enlisting Administrator Support

Budoff (1972) and Christie et al (1972) have emphasized the importance of enlisting administrative support as a crucial factor in gaining staff acceptance of the consulting teacher and in promoting the active participation by regular class teachers.

Vlasak (1974) examined the relationship between skills and other traits of elementary school principals to teacher attitudes toward providing services for handicapped students in the regular classrooms. One hundred fifty-one principals and 778 classroom teachers were studied. Results indicated that none of the principals' skill areas were reliable predictors of their teachers' attitudes toward regular classroom integration of handicapped students. Interpersonal skills, however, were better predictors than either technical or conceptual skills. No relationship was found between the principals' sex, age or race/ethnicity and teachers' attitudes. Principals' experience in elementary teaching was a significant predictor of teachers' attitudes. The longer he/she was an elementary teacher, the less accepting was the teacher's attitudes. Also significant was the principals' experience in that role with responsibilities for handicapped students. The longer the principals' experience, the less accepting were the teachers. No relationship was found between principals' attitudes, principals' experience as special education teachers, non-principals' formal special education course work and teacher attitudes. A possible explanation for these findings is that principals with many years of experience are likely to be most familiar with the segregation model of dealing with handicapped children, and consequently may tend to be resistant to the unfamiliar idea of integration. Brickell's (1961) comment previously cited, concerning teacher apathy or opposition toward change because of perceived inadequacy may equally apply to administrators.

Conclusions

A review of the literature was optimistic regarding successful implementation of the integration model for handicapped children, and of the consulting teacher role for special education teachers. It was also suggested that:

1. The role of the special education teacher needs to be reevaluated.

2. The consulting role for the special class teacher is feasible.

3. Resource programs benefit from continuing cooperation between the special class and regular class teachers.

4. Training programs for consulting teachers have successfully been tested.

5. Teaching behaviours of regular class teachers, and their attitudes towards handicapped children, can be modified in a positive direction, by formal and inservice training.

6. Administrative support appears to be a crucial factor in both gaining and maintaining staff acceptance of the consulting teacher approach to special education, and the active participation by regular class teachers in implementation of this approach.

7. Finally, it is apparent that special class teachers, regular class teachers, and their administrators would benefit from orientation and inservice relative to the re-development of special education personnel. In this regard Brickell's (1961) statement has relevance.

> The most successful innovations are those which are accompanied by the most elaborate help to teachers as they begin to provide the new instruction (p.26).

PART IV

ON-SITE INTERVIEWS OF SPECIAL EDUCATION TEACHERS AND THEIR ADMINISTRATORS:

SUPPORT SERVICES TO SPECIAL CLASS TEACHERS

An exceptional school situation is one in which interaction between a student and his (regular) class teacher has been limited to such an extent, that external intervention is deemed necessary by the teacher to cope with the problem. M. Stephen Lilly

Assuming that Special Class teachers also require external support, the following questions are posed:

What are the sources, types, frequencies and adequacy of professional support services used by Alberta Special Class Teachers?

What "mix" of professional support staff is deemed to be optimal?

What instructional materials and equipment have been found by Special Class teachers to be particularly useful/useless?

SUPPORT SERVICES TO SPECIAL CLASS TEACHERS AS PERCEIVED BY SPECIAL CLASS TEACHERS AND THEIR ADMINISTRATORS[12]

Source, Type, Frequency and Adequacy of Professional Support Services

Special class teachers were asked for their perceptions of the type, frequency and adequacy of support services. Table 45 presents this information for support services from the various sources.

Psychologists

With the exception of psychologists from the school system and LAC or LAFS the mean frequency of use of psychologists (Mental Health Services, contracted, Glenrose or Calgary Children's Hospital) is less than "sometimes." The types of service provided are primarily diagnosis for placement, program planning and follow-up. Perceived adequacy is "useful about half the time."

Eighty-six (62.3%) and 22 (15.9%) of the special class teachers reported using the services of psychologists from the school system, and from LAC or LAFS respectively. Frequency of use averaged "sometimes." The type of service provided was primarily in the areas of diagnosis for placement and follow-up. The perceived adequacy of service was higher than that reported for psychologists from the other sources.

Psychiatrists

Less than 8% of special class teachers reported having used the services of psychiatrists from any source with the majority reported mean frequency of use as "infrequently." With the exception of psychiatrists from the school systems and Glenrose or Calgary Children's Hospital whose perceived adequacy was greater than "useful about half the time"; services from psychiatrists were perceived as between "sometimes useful" and "useful about half the time."

Social Workers

Support services by social workers is another resource reportedly used by few of the teachers. Social workers employed by other government agencies were reportedly utilized by 24.6% of the respondents and those employed by the school system by 15.9% of the special class teachers. The services provided were primarily in the area of follow-up and were seen as "useful about half the time."

---

[12] Significnace tests were not performed on the data in this section, since the responding groups partially overlapped making the responses partially dependent and partially independent.

Table 46

Descriptive Statistics for Type, Frequency and Adequacy of Support Services as Perceived by Special Class Teachers Who Report Actually Receiving Service

Support Services From:	Number Reporting Use	Frequency of Service	Adequacy of Service	Number Reporting These Services: Diagnosis for Placement	Program Planning	Follow-up	In-Service
	N %	$\bar{X}$	$\bar{X}$				
Psychologists							
Mental Health Service	38(27.5%)	2.71	3.07	30	12	20	2
School System	86(62.3)	3.06	3.52	82	39	64	27
Contracted	23(16.7)	2.82	3.21	22	12	8	5
LAC or LAFS	22(15.9)	3.27	4.14	22	17	17	17
Glenrose or Calgary Children's Hospital	31(22.5)	2.19	3.29	26	11	11	2
Psychiatrists							
Mental Health Service	7(5.1%)	2.14	2.71	6	1	2	0
School System	11(7.9)	2.63	3.27	11	4	10	1
Contracted	2(1.4)	3.00	2.50	2	1	0	0
Glenrose or Calgary Children's Hospital	8(5.8)	2.50	3.38	8	3	4	0
Social Workers							
Mental Health Service	17(12.3%)	2.52	2.88	4	2	15	0
Division of Ser. for Handicapped	2(1.5)	3.00	3.00	0	0	2	0
Employed by School System	22(15.9)	3.18	3.50	10	4	17	0
Other Gov't Agencies	34(24.6)	2.64	3.38	8	4	29	0
Health Personnel							
Health Units or City Board of Health	110(79.7%)	3.36	3.88	81	12	70	1
Family Physician	37(26.8)	2.51	2.73	30	6	9	2
Specialists	45(32.6)	2.60	3.71	40	6	18	2

Table 46 (continued)

(Ratings of teachers who report actual use of each support service)

Support Services From:	Number Reporting Use		Frequency of Service	Adequacy of Service	Number Reporting These Services: Diagnosis for Placement	Program Planning	Follow-up	In-Service
	N	%	$\bar{X}$	$\bar{X}$				
Consultants								
Alberta Education	30	(21.7%)	2.50	3.07	4	15	13	9
LAC or LAFS	20	(14,5)	3.10	3.95	13	18	13	13
Free University Clinic	18	(13.0)	2.55	4.00	11	9	5	3
Speech Therapy/ Pathology								
Health Units or City Board of Health	33	(23.9%)	2.91	3.42	25	19	20	5
School System	49	(35.5)	3.18	3.55	47	36	36	9
Contracted	2	(1.4)	1.50	4.00	1	1	1	0
LAC	3	(2.1)	2.33	4.00	2	1	1	2
School System Personnel								
Guidance	74	(53.6%)	3.62	3.89	58	39	56	16
Special Education	76	(55.1)	3.64	4.09	50	53	56	34
Consultants or Supervisors	68	(49.2)	3.26	3.92	37	60	46	35
School-based Administrators	100	(72.4)	3.61	3.90	37	51	80	12
Centrally-based Administrators	58	(42.0)	3.31	3.79	21	32	34	28

Scales Frequency: 1 - Never, 2 - Infrequently, 3 - Sometimes, 4 - Frequently
5 - Very Frequently

Adequacy: 1 - Seldom or Never Useful, 2 - Sometimes Useful,
3 - Useful about half the time, 4 - Often Useful,
5 - Very Often Useful

Health Personnel

Health personnel from the Health Units or the City Board of Health were reported used by almost eighty percent (79.7%) of the special class teachers. Frequency of services was "sometimes" with type of service provided being primarily diagnosis for placement and follow-up. Adequacy of service approached "often useful." Public health nurses were rated relatively high on the adequacy scale.

Family physicians and specialists had reportedly provided services to 26.8% and 32.6% (respectively) of the special class teachers. Frequency of service was between "infrequently" and "sometimes" with type of service being primarily diagnosis for placement. The services provided were seen as approaching "useful about half the time," for family physicians and "often useful" for specialists.

Consultants

The largest number of teachers reporting services from consultants, were from consultants from Alberta Education (21.7%). Services from Alberta consultants were primarily in areas of program planning and follow-up. Adequacy was perceived as "useful about half of the time." Consultants from LAC or LAFS and the Free University Clinic while utilized by less than 15% of the teachers were perceived as "often useful." The low utilization of LAC or LAFS project consultants reflects the fact that their service was limited to two zones.

Speech Therapy/Pathology

Over one-third (35.5%) and 23.9% of special class teachers reported having received support services from speech therapists from the school system and the health units or City Board of Health respectively. Reported frequency of services was "sometimes" with adequacy between "useful about half the time" and "often useful." Services provided were mainly in the areas of diagnosis for placement, program planning and follow-up. The frequency of use of speech therapists from LAC and those contracted was "infrequently" and adequacy was reported as "often useful".

School System Personnel

More special class teachers reported having received support services from school system personnel than from any other single category. Over fifty percent of those responding had received services from Guidance (53.6%), Special Education (55.1%) and school-based administrators (72.4%). Reported frequency of service for all school system personnel was between "sometimes" and "frequently." Service was provided in all categories - diagnosis for placement, program planning, follow-up and inservice. School system personnel provided the vast majority of inservice training. (The only other support personnel providing in-service training appears to be psychologists from the school system or LAC or Lafs and consultants from LAC or LAFS.) Service provided by school system personnel was rated as approaching "often useful."

Overall Adequacy

Adequacy of specialist support services was perceived in approximately the same pattern regardless of whether the special class teachers were categorized according to position occupied, source of the support for diagnosis, number of special education and related courses, total teaching experience, or special education teaching experience (see Appendix K). Table 47 contains the mean ratings, standard deviations and N's collapsed across these categorization variables and undifferentiated as to source of the specialist. In order from lowest to highest of perceived adequacy were psychiatrists, social workers, speech therapists, psychologists (excluding those from LAC and LAFS), health workers and school system personnel.

Table 47

Adequacy of Specialist Support Services as Perceived by the Special Class Teacher

Specialist	Mean***	SD	N*
Psychiatrists	1.82	1.26	41
Social Workers	2.50	1.31	67
Speech Therapists	2.87	1.50	87
Psychologists**	3.11	1.21	114
Health Workers	3.40	1.08	120
School System Personnel	3.69	.98	134

*N = those respondents who chose to rate the service (some of whom may not have actually used the service)
** = excluding LAC and LAFS educational psychologists
*** = Scale. Seldom or Never Useful - 1
Sometimes Useful - 2
Useful about half-time - 3
Often Useful - 4
Very Often Useful - 5

Administrators were also asked for their perceptions of the type, frequency and adequacy of support services. Table 48 presents this information according to the various sources.

Table 48

Descriptive Statistics for Type, Frequency and Adequacy of Support Services as Perceived by Administrators Who Report Actually Receiving Service

Support Services From:	Number Reporting Use		Frequency of Service	Adequacy of Service	Number Reporting These Services: Diagnosis for Placement	Program Planning	Follow-up	In-Service
	N	%	$\bar{X}$	$\bar{X}$				
Psychologists								
Mental Health Service	95	(52%)	2.75	3.12	75	20	46	4
School System	111	(61)	3.88	3.96	93	74	83	64
Contracted	45	(25)	3.06	3.86	38	23	24	18
LAC or LAFS	46	(25)	3.34	4.11	42	26	31	22
Glenrose or Calgary Children's Hospital	84	(46)	2.36	3.67	71	39	43	3
Psychiatrists								
Mental Health Service	58	(32%)	2.40	3.12	46	12	30	3
School System	18	(10)	3.20	3.28	12	9	9	6
Contracted	12	(6.6)	2.57	3.46	8	5	4	2
Glenrose or Calgary Children's Hospital	39	(21)	2.17	3.49	33	7	17	2
Social Workers								
Mental Health Service	83	(46%)	2.56	3.01	38	16	51	5
Division of Ser. for Handicapped	31	(17)	3.03	3.56	13	9	16	4
Employed by School System	31	(17)	3.45	3.87	22	18	20	6
Other Gov't Agencies	90	(49)	2.37	3.10	29	23	65	6
Health Personnel								
Health Units or City Board of Health	152	(84%)	3.39	3.84	100	30	107	14
Family Physician	99	(54)	2.60	3.32	70	12	57	2
Specialists	80	(44)	2.66	3.56	62	17	45	7

Table 48(continued)

(Ratings by Administrators who report actual use of each support service)

Support Services From:	Number Reporting Use		Frequency of Service	Adequacy of Service	Number Reporting These Services: Diagnosis for Placement	Program Planning	Follow-up	In-Service
	N	%	$\bar{X}$	$\bar{X}$				
Consultants								
Alberta Education	94	(59%)	2.72	3.66	20	49	46	41
LAC or LAFS	32	(18)	3.40	3.84	24	27	22	24
Free University Clinic	39	(21)	2.41	3.58	35	21	14	5
Speech Therapy/ Pathology								
Health Units or City Board of Health	85	(47%)	2.88	3.68	59	54	51	15
School System	65	(36)	3.64	4.03	57	49	43	21
Contracted	3	(1.6)	1.67	2.33	1	1	0	0
LAC	17	(9.3)	2.88	4.21	15	12	12	8
School System Personnel								
Guidance	103	(57%)	3.84	4.08	78	72	77	48
Special Education	80	(44)	3.68	3.97	65	64	63	48
Consultants or Supervisors	95	(52)	3.52	3.96	50	84	62	57
School-based Administrators	154	(87)	3.51	3.62	56	109	116	55
Centrally-based Administrators	138	(80)	3.19	3.51	60	105	90	72

Scales Frequency: 1 - Never, 2 - Infrequently, 3 - Sometimes, 4 - Frequently
5 - Very Frequently

Adequacy: 1 - Seldom or Never Useful, 2 - Sometimes Useful,
3 - Useful about half the time, 4 - Often Useful,
5 - Very Often Useful

Psychologists

Sixty-one percent and fifty-two percent of the administrators reported use of psychologists from the school system and Mental Health Services respectively. This was followed by 46% for psychologists from Glenrose or Calgary Childrens' Hospital and 25% for psychologists contracted or from LAC or LAFS. Frequency of service was less than "sometimes" for those from Mental Health Service and Childrens' Hospitals and greater than "sometimes" for those from the school system, contracted and LAC or LAFS. Adequacy approached or exceeded "often useful" with perhaps the exception of psychologists from Mental Health Service whose services were viewed as closer to "useful about half of the time." From all sources, types of services reported used were in the following decreasing order - diagnosis for placement, follow-up, program planning and inservice.

Although the percentage reporting utilization was higher for the administrators, the pattern in terms of frequency, adequacy and type paralleled that reported by the teachers.

Psychiatrists

Again the percentages reporting use were higher for administrators (this was the case for all professionals providing support services) with 32% reporting having used psychiatrists from Mental Health Service and 21% from Childrens' Hospitals. Mean frequency of service was again "infrequently" ("sometimes" for psychiatrists from the school system) and adequacy "useful about half of the time." Services received were primarily in the area of diagnosis for placement and follow-up.

Social Workers

Forty-nine percent and 46% reported having received services from social workers from other government agencies and Mental Health Services, respectively; seventeen percent from the Division of Services for the Handicapped and those employed by the school system. As did the teachers, administrators reported having utilized their services "sometimes" and rated them as greater than "useful about half of the time." While the area of greatest service was again perceived to be follow-up, service was also frequently provided in the areas of diagnosis for placement and program planning.

Health Personnel

Health personnel from the Health Units or the City Board of Health were reported used by 84% of all administrators; family physicians and specialists by 54% and 94% respectively. Mean frequency of service was "sometimes" and adequacy was reported as between "useful about half the time" and "often useful." Administrators agreed with teachers in assigning a relatively higher rating to public health nurses on the adequacy scale. Primary use was in the areas of diagnosis for placement and follow-up.

Consultants

Fifty-nine percent, 21% and 18% reported using the services of consultants from Alberta Education, Free University Clinic and LAC or LAFS respectively. Mean frequency was between "infrequently" and "sometimes" with mean adequacy approaching "often useful."

Speech Therapy/Pathology

Services of speech therapists were reportedly received primarily from health units or the City Board of Health (47%) or the school system (36%). Mean frequency varied from "infrequently" to approaching "frequently", adequacy from "sometimes useful" to "often useful." Again services were primarily in the areas of diagnosis for placement, program planning and follow-up.

School System Personnel

As with special class teachers more administrators reported having received support services from school system personnel than from any single other category. Reported frequency of use and adequacy ratings paralleled those of the teachers as did pattern of service.

Overall Adequacy

Adequacy of specialist support services as perceived by the administrators is presented in Table 49. It is of interest to note that these ratings are comparable to the special class teachers ratings of the specialist services (see Table 47). In order from lowest to highest of perceived adequacy are psychiatrists, social workers, speech therapists, psychologists, health workers and school system personnel. These ratings remain relatively stable regardless of whether the administrators are categorized according to region, location or source of diagnosis (see Appendix K).

Table 49

Adequacy of Specialist Support Services As Perceived by the Administrators

Specialist	Mean***	SD	N*
Psychiatrists	2.40	1.26	107
Social Workers	2.53	1.08	144
Speech Therapists	3.09	1.28	137
Psychologists**	3.11	1.11	169
Health Workers	3.31	1.09	169
School System Personnel	3.53	.89	179

* N=those who chose to rate the service (some of whom have used the services)
** excluding LAC and LAFS educational psychologists
*** Scale Seldom or Never Useful -1
Sometimes Useful -2
Useful About Half-time -3
Often Useful -4
Very Often Useful -5

The Selection Of Appropriate Professional Support Staff

The question of appropriate utilization of professional support staff follows from the previous section on utilization and adequacy of those services. Although definitive information was not obtained, some careful extrapolations may be made.

Both special class teachers and administrators have similarly judged the adequacy of the professional support staff. Regardless of how these ratings are categorized as to origin of the specialist the results consistently show a perceived superiority of educators from the school system and the LACS or LAFS projects. It should also be noted that, overall, the frequency of contact was also greater with school system personnel. (Service by LACS or LAFS professionals was restricted to two zones and this limited overall frequency of use.) Three interpretations of this finding appear to be in order.

1. Professionals from the school system and LACS or LAFS are likely to be more attuned to the functional capabilities and limitations within the school jurisdictions. This would enable a better account to be taken of the local capabilities for dealing with the handicapped student in the school setting. It is reasonable to expect that as the support specialist becomes more familiar with the situationally

relevant factors to the provision of services on the local school scene, better consultative assistance may be made. Specialists with some limited contact and involvement may be expected to provide less adequate services as perceived by the special class teacher and their administrators. This appears to be reflected in the mean ratings of psychiatrists who might be expected to be less attuned to the school (on an overall basis). Additional support for this conjecture is in the findings that within the different specialist groups, those originating from within the education discipline and service received higher ratings than those who did not. For example, Tables 46 and 48 in the preceding section show higher ratings for psychologists from the school system or LAC/LAFS and social workers from the school system. Interestingly, a comparison of Tables 46 and 48 with Tables 47 and 49 shows a tendency for the latter tables to lower mean ratings for all specialists and to accentuate the differences. The difference, of course, is that Tables 47 and 48 included respondents who had not used the services but chose to rate adequacy anyway.

2. Related to the first point is a communication factor. As with other specialist groups, educators have their own specialized vocabulary. Specialists originating outside the education discipline may experience a lesser ability to communicate compared to those originating within the discipline. In reviewing the tables in the last section, there is a tendency for distance from the immediate education discipline to be related to perceived adequacy of the service.

3. The data from this portion of the interviews may support the recommendation that the Special Education Teacher Position grant regulation be modified to permit the use of special education teachers more of the time as support personnel to regular class teachers. Special education teachers are from the education profession, are part of the school system and would function in close proximity to those requiring assistance. Some or all of these conditions were associated with the higher ratings on frequency and adequacy assigned by those interviewed.

The limited information in this study leaves many questions unanswered regarding the selection of appropriate specialist support services. The tendency of special class teachers and administrators to perceive the services of school system specialists more adequate suggests a greater reliance on this type of specialist. This high rating also held for those reporting use of LAC or LAFS educational psychologists and consultants. However, the frequency of use data suggests this already occurs and may indeed be a determining factor rather than a resulting factor in the adequacy ratings. Considering the mean adequacy ratings, the highest mean values were between useful half of the time and often useful with standard deviations of approximately one category. Although this may be partially accounted for by the nature of the scale, room for improvement is evident. More study is needed regarding service quality at all levels.

Materials and Equipment

Special class teachers were asked in the interviews to list instructional materials and equipment they found to be particularly useful/useless. Table 50 lists the materials rated by ten or more special class teachers as useful or very useful.

Table 50

Materials and Equipment Rated Useful or Very Useful

Material/Equipment	No. of Teachers
Cassettes and Tape Recorders	50
Language Master Program	47
Specific Skill Series	46
Schoolhouse SRA	23
Language Patterns	18
Reader's Digest	17
Stott Programmed Reading and Math	15
Flash X	15
Overhead projector	14
Webster Wheels	14
Primary Phonics	14
Listening Centre	13
Individual Reading Program	13
Distar Reading	11
Peabody Language	11
Phonics We Use	11
Palo Alto Reading Series	10

It is interesting to note that with the exception of one, the materials listed are aids for reading and language development.

Appendix L lists all materials and equipment found useful by special class teachers. In addition it lists those materials or equipment found not useful or ineffective.

Further information on these materials can be found in:

Recommended Remedial Materials: Handbook for the Instruction of The Learning Disabled. (Alberta Education, 1975), and

Learning Disabilities: A Select Bibliography of Resources (Alberta Education, 1974)

ORGANIZATION OF CLASSES AND TEACHING PROCEDURES

REPORTED BY SPECIAL EDUCATION TEACHERS

What are the class sizes and the lengths of remediation periods employed by Alberta Special Education teachers?

How much time is spent by special education teachers in providing consultative assistance to regular teachers?

What are Special Class teachers perceptions of the degree of use, and the efficacy of various teaching agents and procedures?

Organization For Instruction

Table 51 presents the sizes of groups in special classrooms and the average length of the remediation periods according to teaching position.

Table 51

Average Length of Remediation Periods and Group Sizes Reported by Special Class Teachers

		Teaching Position				
		Itinerant Resource Teacher	Resource Room, Half time or Less	Resource Room More than Half Time	Special Segregated Class	Learning Assist. Centre
	N	6	34	73	16	8
Group Size						
smallest		1.7	3.5	2.3	6.5	1.7
largest		5.7	6.5	8.0	10.3	7.3
average		3.7	4.8	5.2	9.6	4.0
Minutes Daily Instruction/ student						
smallest group		88.3	38.5	54.0	47.3	53.9
largest group		106.7	46.8	80.3	52.7	40.4
average group		90.0	44.5	71.5	111.7	55.6

The largest group is the special segregated class and the smallest that of the itinerant resource teacher. The average daily instruction period varies from approximately 3/4 of an hour to two hours, with the largest group (the special segregated class) having the longest average instruction time.

Table 52 presents the number and length of consultation contacts of special class teachers with other teachers according to teaching position. As expected, itinerant resource teachers made this type of contact most frequently. However, the average length of each consultation was shorter than for the other groups.

Table 52

Number and Length of Consultation Contacts With Other Teachers and Total Contact Minutes Per Week: Averages Reported by Special Class Teachers

Consultation Variable	Averages By Type Of Teaching Position				
	Itinerant Resource Teacher	Resource Room half-time or less	Resource Room more than half time	Special Segregated Class	Learning Assist. Centre
N	6	34	73	16	8
Number of consultation contacts per week	44.2	10.2	13.2	12.52	9.1
Average length of consultation (minutes)	4.0	11.4	10.4	11.7	12.5
Total consultation minutes per week	185.0	108.4	122.5	116.8	51.7
Hours	3.1	1.8	2.0	1.9	0.9

Resource Room teachers were categorized according to their perceptions of whether their administrators generally facilitated their role as assistants to other teachers. Table 53 presents the results. Those who responded "generally yes" to this reported an average of 145.6 minutes per week consulting with peers. The group that felt their administrators were generally not facilitative of this role recorded a 79.5 minute average per week. The total group reports an average of nearly two hours per week. Some relationship exists between administrators' facilitation of the consulting role and the time spent at this task. The biserial correlation coefficient indexing the association is r_{bis} = .41 (99% confidence interval = .27 -.55).

Table 53

Average Consulting Minutes Per Week to Other Teachers by Full-Time Resource Room Teachers and Perceptions of Administrator Facilitation

	Administrator Facilitative	Administrator Not Facilitative	Total
N	44	38	82
Consulting Minutes per Week (Mean)	145.6*	79.5*	115.0
Standard Deviation	116.4	61.4	100.1
Average Hours/Week	2.4	1.3	1.9

* Mean difference is significant ($p<.01$)

The special class teachers were asked to estimate the proportion of total teaching time and efficacy (efficiency and productiveness) of various teaching agents and procedures. Table 54 presents the results.

Table 54

Special Class Teachers' Perceptions of Percent Utilization and Efficacy of Pedagogical Practices Employed

Teaching Practice	Percentage of Total Time $\bar{X}$*	Efficacy Rating $\bar{X}$**
Teacher	4.9	4.2
Paid Aide	1.4	2.5
Volunteer Aide (including parents)	1.3	2.1
Student Tutors	1.5	2.6
Independent Study (minimum assistance from others or machines)	2.9	3.4
Teaching Machines	3.0	3.8
Pairs Practice (2+ remedial students share an activity)	3.1	3.7

* Percentage of Total Time: 1 - Not used, 2 - 5%, 3-5 - 10%, 4-11 - 20%, and 5>20%

**Efficacy: 1 - Very Ineffective, 2 - Ineffective, 3 - Somewhat effective, 4 - Effective, 5 - Very Effective

While the teacher was perceived as utilizing the greatest percentage of time and with the greatest efficacy, the paid aide, the volunteer aide and the student tutor were utilized for less than five percent of total teaching time and were perceived as being less than effective. In fact they were perceived as less effective than independent study, pairs practice and the use of teaching machines.

TEACHING AND LEARNING IN THE SPECIAL CLASSROOM

For various kinds of disabilities:

What are the Special Class teachers' perceptions concerning the proportion of pupils served by the teacher, by others in
-diagnosis?
-program planning?
-follow-up of pupil/class progress?

How adequate are each of diagnosis, program planning, teaching and follow-up?

How congruent is the planning with the diagnosis, and teaching with the plan?

Proportion Served, Adequacy And Congruency Of Diagnosis, Planning, Teaching And Follow Up

The special class teachers were asked for their perceptions of the

1. proportion of students served by themselves and others in diagnosis, program planning and follow-up;
2. adequacy of diagnosis, program planning and follow-up by themselves and others;
3. congruency of program planning with diagnosis by themselves and others; and,
4. adequacy and congruency of their teaching in accordance with the program plan.

Table 55

Special Class Teachers' Perceptions of Proportion of Students Served and Adequacy of Diagnostic Services by Self and Others - According to Disability Area (N is the number responding)

Area		Proportion*			Adequacy**		
		N	$\bar{X}$	SD	N	$\bar{X}$	SD
Reading/Spelling	Self	133	4.7	.8	131	3.9	.7
	Others	131	3.6	1.6	114	3.8	1.0
Language	Self	132	4.4	1.2	126	3.7	.8
	Others	126	3.1	1.7	101	3.6	1.0
Arithmetic	Self	119	3.3	1.8	194	3.6	1.2
	Others	110	2.7	1.8	84	3.0	1.3
Social/Emotional	Self	131	3.7	1.7	111	3.6	.9
	Others	133	3.6	1.5	116	3.7	.8
Perceptual or Motor skill	Self	118	3.5	1.7	108	3.7	.9
	Others	128	3.3	1.6	107	3.7	.8

* Proportion Scale
None.....1
Less than 5%.....2
5 - 10%.....3
11-20%.....4
21-100%.....5

** Adequacy Scale
Very Inadequate.....1
Inadequate.....2
Sometimes adequate/ inadequate.....3
Adequate.....4
Very adequate.....5

These perceptions were requested for each disability area with the exception of the follow-up.[13]

Table 55 shows the proportion of students served and adequacy of diagnostic services. Proportion of students diagnosed by the special class teacher was greater than that by others. These proportions for the first two areas fell between 11 and 20 percent of the students and between 5 and 10 percent for the last area. The proportion diagnosed in the Social/Emotional and Perceptual/Motor Skill areas were between five and 10 percent for both the special class teachers and others. Adequacy of the diagnostic services for all areas, except arithmetic by others, tended toward an "adequate" rating. Those services provided by others in arithmetic diagnosis was rated lower at about "sometimes adequate-sometimes inadequate."

Tables 56 shows proportion of students served and adequacy for program planning. More program planning was done by the special class teacher.

Table 56
Special Class Teachers' Perceptions of Proportion of Students Served and Adequacy of Program Planning by Self and Others - According to Disability Area (N is the number responding)

Area		Proportion* N	$\bar{X}$	SD	Adequacy** N	$\bar{X}$	SD
Reading/Spelling	Self	134	4.8	.7	133	4.0	.6
	Others	130	2.7	1.6	102	3.4	1.2
Language	Self	131	4.6	1.0	126	3.8	.7
	Others	128	2.6	1.6	93	3.2	1.2
Arithmetic	Self	116	3.5	1.8	96	3.7	1.1
	Others	106	2.3	1.6	75	2.9	1.4
Social/Emotional	Self	132	3.9	1.5	120	3.5	.9
	Others	128	2.6	1.7	93	3.2	1.2
Perceptual or	Self	132	3.8	1.5	115	3.6	.9
	Others	128	2.7	1.6	94	3.4	1.2

*Proportion Scale
None.....1
Less than 5%.....2
5-10%.....3
11-20%.....4
21-100%.....5

**Adequacy Scale
Very inadequate.....1
Inadequate.....2
Sometimes adequate/ inadequate.....3
Adequate.....4
Very Adequate.....5

[13]Statistical significance tests were not performed because the data were partly dependent, partly independent.

than others for all disability areas. Reading/spelling and language program planning by special class teachers was highest ranging between 21 and 100%. Arithmetic, Social/Emotional and Perceptual/Motor Skills program planning ranged between 11 and 20 percent by the special class teachers. Program planning provided by others served less than five percent of the students. Average perceived adequacy of program planning by the special class teacher tended to be greater (approaching "adequate") than that provided by others (approaching "sometimes adequate, sometimes inadequate").

Estimated congruency between the diagnosis and program planning is presented in Table 57. The special class teacher also found congruency greater with their own planning than when it was provided by others. The special class teachers' own congruency tended to be rated "quite similar" with others' congruency being rated about "somewhat similar."

Table 57
Special Class Teachers' Perceptions of Congruency of the Program Planning with Diagnosis by Self and Others - According to Disability Area
(N is the number responding)

Area		Congruency*		
		N	$\bar{X}$	SD
Reading/Spelling	Self	133	4.1	.6
	Others	102	3.6	1.2
Language	Self	125	4.0	.7
	Others	88	3.4	1.2
Arithmetic	Self	96	3.7	1.2
	Others	72	2.9	1.4
Social/Emotional	Self	119	3.7	1.0
	Others	72	3.3	1.1
Perceptual or Motor Skill	Self	115	3.7	.9
	Others	93	3.4	1.1

* Congruency Scale
Very different 1
Not related.....2
Somewhat similar....3
Quite similar.....4
Very similar.....5

Ratings of self-adequacy in teaching and congruency between the teaching and program plan are presented in Table 58. Both adequacy and congruency estimates across disability areas were similarly rated between "sometimes adequate, sometimes inadequate" and "adequate", and "somewhat similar" and "quite similar" respectively.

Table 58
Special Class Teachers' Perceptions of Self-Adequacy in Teaching and Congruency of Teaching with the Program Plan - According to Disability Area (N is the number responding)

Area	Adequacy*			Congruency**		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Reading/Spelling	133	4.1	.7	132	4.1	.6
Language	128	3.8	.9	125	4.0	.7
Arithmetic	107	3.4	1.4	96	3.8	1.2
Social/Emotional	127	3.7	1.0	124	3.7	1.0
Perceptual or Motor Skill	122	3.5	1.0	117	3.8	.9

* Adequacy Scale
- Very Inadequate.....1
- Inadequate.....2
- Sometimes Adequate/ Inadequate.....3
- Adequate 4
- Very Adequate 5

** Congruency Scale
- Very Different.....1
- Not Related.....2
- Somewhat Similar.....3
- Quite Similar.....4
- Very Similar.....5

Table 59 presents proportion served, adequacy and congruency (with plan) for follow-up. A greater proportion of students are followed-up by the special class teacher (11 to 20 percent) than others (six to 10 percent). Adequacy and congruency were similar for both groups approaching "adequate" and "quite similar" respectively.

Table 59

Special Class Teachers' Perceptions of Pupil Progress Follow-Up by Self (To Other Classrooms) and Others - Proportion of Students Followed-Up, Adequacy, Congruency with Plan (N is number responding)

	Proportion*			Adequacy**			Congruency***		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Self	132	4.5	1.1	129	3.8	.9	126	3.9	.9
Others	133	3.8	1.5	122	3.6	1.0	117	3.6	1.0

*Proportion Scale	**Adequacy Scale	***Congruency Scale
Nine 1	Very Inadequate 1	Very Different 1
Less than 5% ..2	Inadequate 2	Not Related 2
6-10% 3	Sometimes Adequate/	Somewhat Similar....3
11-20% 4	Inadequate 3	Quite Similar 4
21-100% 5	Adequate 4	Very Similar 5
	Very Adequate 5	

Allowing that the five point scale used tends to elicit a "middling" type of response, it is reasonable to conclude that the special class teachers were relatively satisfied with the adequacy of diagnostic, program planning and follow-up services whether provided by themselves or others. There was a tendency, however, for the special class teacher to be slightly more satisfied with their own service. Similarly, congruency between diagnosis and plan were seen as reasonably satisfactory for both the special class teacher and others. No difference was noted in this trend in the special teachers estimate of self-adequacy in teaching and their ability to teach in relative congruence with the program plan. Although by average ratings adequacy and congruency appear with relative satisfaction, the standard deviations between about one and 1½ categories show some variability in the ratings. Room for improvement is evident.

PART V

ADMINISTRATION AND GOVERNANCE

:Size and nature of administrative structures for special education
:The Alberta Scene

What factors need to be considered relative to size and nature of administrative structures in providing services to handicapped pupils and their teachers?

LITERATURE REVIEW

Size and Nature of Administrative Structures for Special Education

The size of a school unit is less important than its ability to meet the objectives upon which the system organization is based. However, Fain (1970) suggests that administrative functions depend upon size for efficiency and economy. In his analysis, small size may adversely affect the quality of education. For example, a district with a small population is often fiscally unable to provide specialized services.

A number of recommendations have been made over the years regarding the size of administrative districts for providing comprehensive and effective student services. Chalfant (1967) suggests establishing an administrative area that: is large enough to support competent administrative and supervisory service without adding unduly to program costs; has a minimum of 10,000 to 12,000 pupils in order to provide the essential administrative services at a reasonable cost per pupil; is large enough to supplement the state guaranteed foundation program; requires not more than two hours a day travel time; is related to other government units in order that maximum cooperation between the schools and other social agencies is feasible; and represents a natural social and economic unit in which all members of the community may participate. Very often the unit is organized within a geographic region.

Among smaller districts, a trend that has gained momentum is for districts to cooperatively arrange and share services which would otherwise be unavailable or uneconomical. This has occurred in many states under government mandate or at least moral support. To a lesser degree, similar arrangements have been noted in Canada. Cooperative agreements between districts have been made to obtain or share services in inservice education, special education, guidance, curriculum development, purchasing, educational television, data processing and special teachers. With appropriate cooperative arrangements, each district may remain independent and unique to its community while increasing its level of student services.

Hughes et al (1970) suggest that when districts enter into cooperatives, the following considerations should be taken into account:

1. The state's organization and natural geography or terrain may have a profound influence on the size of the cooperative.

2. The minimum student enrollment for any cooperative unit should be 10,000 pupils, with an optimum range of 50,000 - 60,000 pupils.

3. A "rule of thumb" is that driving time to the centers should not exceed one hour for 90 percent of the area to be serviced (p.2).

In general, the small school district cannot provide special education services because of the small number of exceptional children. Even through district reorganization and amalgamations have taken place during the past forty years, many still lack sufficient numbers of exceptional children to justify these services from the standpoint of efficiency and economy.

In some smaller districts, especially in rural areas, exceptional children have been relinquished to a larger district with the needed services. Usually this requires the payment of tuition fees on behalf of the special student. According to Chalfant (1967), this arrangement has inherent problems.

> The smaller participating districts often have no voice in the administrative or educational planning and are completely dependent upon the sponsoring districts from year to year. Children from the districts operating special classes are often given priority over children from other districts. If the classes are filled to capacity, a child from another district may be denied the service. On the other hand, the unexpected withdrawal of participating districts tends to undermine programs by leaving teachers with tenure and too few pupils for a class. These kinds of problems often contribute to temporary, discontinous, administrative arrangement which do not always contribute to the educational needs of children. (p. 5)

Attempts have been made in a number of states to overcome these problems by cooperative special education programs between two or more school districts. Responsibility, administration, resources, costs and staff are shared in order to provide the required services. Among the advantages of a formal cooperative administrative structure are:

(a) a legal contract provides both continuity and stability for the programs;
(b) administrative and financial arrangements are defined;
(c) sufficient numbers of children can be obtained to justify special classes or services for the various areas of exceptionality;
(d) per capita cost for special services is reduced;
(e) space and facilities available in the various districts may be shared, thus providing more adequate classrooms and services; and
(f) a competent professional staff trained in the education of exceptional children can be employed. (Chalfant, 1967, p.6)

In the United States the concept of regional cooperation between school districts mushroomed in the late sixties and early seventies. The reason for this phenomenon was two fold. First, many districts realized special services were too costly to obtain individually. Second, cooperation between districts was promoted by federal and state governments through permissive legislation or mandate. In addition, special funding was made available to those districts involved in cooperative ventures.

According to Achilles et al (1974), the educational cooperative is essentially a confederation. It is not a superstructure imposed on the participating school districts; it is consolidation of those school districts. Member districts retain autonomy and local control. They make the decision as to what program the cooperative will undertake and each district remains free to participate or not to participate in each of the programs.

Hughes et al (1970) have described the operation of an education cooperative.

> Small contiguous school systems join together to create the capacities to perform educational operations that cannot be implemented in the present structure. Giant school systems can decentralize into local autonomous units but retain the advantages of the large district. A new administrative structure is established providing for both local autonomy and multidistrict coordination and operation. A new integrated system of instruction is effected through the use of mass and individualized communications media and mobile facilities. A system of planning and evaluation is implemented. An operations system of communications is established, and new administrative practices are introduced incorporating legal and financial requirements, new staff utilization patterns and new staff training procedures. State departments of education and colleges and universities participate with the local school in responsible roles in the planning and execution of these functions. (p. 4)

Experience with the educational cooperative has been encouraging. Several descriptions have been noted in the literature. Prazich (1972) studied administrative delivery systems for the handicapped in Minnesota. He reported that inter-district special education cooperatives have been well accepted and 89.5 percent of the superintendents agreed that services for the handicapped can be greatly improved in this way. More public understanding and involvement has also evolved as a result of the inter-district arrangement. Fain (1970) surveyed the attitudes of trustees towards inter-district organization. He reported that the board members tended to be more favourable toward functions which offer benefits without limiting the district's authority and control over vital issues. For instance, board members were most favourable toward cooperation in special education and data processing and least favourable toward cooperation in teacher placement and school construction. As a group, board members were most favourable to arrangements which resulted in financial benefits.

The influence of the superintendent upon school board members emerged as a significant finding of the Fain (1970) study. Regardless of the method used to determine sources of influence on school board members attitudes and opinions, the district superintendent emerged as most influential. He/she was considered to be most favourable and supportive and was most often sought out for guidance and information. Unexpectedly, the district superintendent had no close challenger to his/her influence upon school board members.

In the Achilles et al (1974) study, cooperative administrative structures were found to operate quality programs. Local and state policy makers had been involved in planning and development. Strong state support was obtained for the arrangement since both program persons and observers were convinced that they were meeting real local needs. The authors further observed:

> If a state system of education believes that an educational cooperative structure is capable of providing improved education within the state it seems incumbent upon the state to provide some financial support or incentive for a cooperative system or at least for the start up of the system. It is equally apparent that if the cooperative is to maintain its local autonomy, local systems must be major contributors to the funding. (p. 220)

The Alberta Scene

Prior to 1973, not all districts in Alberta provided services for handicapped children. However, in 1973 this changed dramatically as a result of the Alberta Education sponsored Educational Opportunities Fund (EOF), Learning Disabilities Fund (LDF) and a continuation of the Special Education Teacher Position Grant. As EOF and LDF grants support was made available to the school boards, special education programming increased throughout the province. In September 1975, the ratio of special education teachers to students in Zone One reached one to two hundred thirty nine. This was somewhat typical of the rest of the province.

The Learning Disabilities Fund was established for the hiring or contracting of specialists in diagnosis and program planning. Personnel supported under this fund were required to be registerd. Because of the difficulty in obtaining appropriate specialists with funds available, some boards were unable to access the fund in 1975. Some boards managed to hire their own specialists by supplementing accessible grant monies out of general revenues. Others, usually the smaller boards, purchased services from larger boards or private consultants.

Still others established inter-district regional shared-services arrangements. Thus the Central Alberta Regional School District No. 3 and the South Eastern Alberta Special Education Cooperative were formed as the administrative superstructure controlled by member boards. A similar arrangement, but with governance and administration assumed by the government, was implemented to serve all districts in Zone 1 (northwestern Alberta); a specialist staff was added to the Regional Office of Alberta Education at Grande Prairie and an advisory council was established to facilitate the operation.

No studies were noted in the literature which compared a government operated service with a shared-services regional one operated by school systems. A possible reason for the dearth of comparative studies is that in the United States (the source of all the research reports) the legal basis for school operation has the local school board responsible, and not the state or federal governments. Thus, relatively few state and federal employees are involved in direct service activities.

Accordingly, decisions between a government operated service and a regional one operated by member boards cannot be based on empirical evidence. Instead, the choice would be based on philosophical criteria. The relative value attached to one or the other of centralization and local autonomy would figure heavily in the decision. However, based on conclusions from American studies, a need exists for the state authority (in Alberta - the provincial government) to initiate and nuture any regional shared-services arrangements. On this point several researchers have noted that intermediate school districts in the United States require strong moral and financial support from the state. It was also noted that boards of intermediate districts devote considerable time and energy to discussions concerning finance (Achilles et al, 1974; Pine, 1972). As a result, a central government authority can expect overtures from a regional authority for additional considerations, including funds.

Conclusions

The distribution of population and resources in Alberta presents special difficulties for the provision of education services to handicapped students. One hundred and forty three school jurisdictions range in student population between 15 and 80,000. These are distributed over an area of approximately 400 miles by 750 miles. Only five of these jurisdictions exceed the suggested minimum of 10 - 12,000 students (Chalfant, 1967; Hughes et al, 1970) for efficient and effective operation of special education services under a single administration. These are the Calgary Public (82,780)[14], Edmonton Public (68,479), Edmonton RCS (29,457), Calgary RCS (21,797) and Strathcona (11,346) jurisdictions. Hughes et al's (1970) suggested optimum range of 50 - 60,000 students is exceeded only by the two largest - the Calgary and Edmonton Public systems.

Some general conclusions are:

1. Some school jurisdictions, because of limitations of size, cannot easily provide the kind and range of specialized service they would like.

2. Regional shared-services arrangements represent a viable alternative for such school systems.

3. Guidelines provided by Chalfant (1967) and Hughes et al (1970) may be considered in organizing and operating a regional shared-services unit.

4. The formation and continued operation of regional shared-services will depend on the initiative and moral support provided by the province.

---

[14] All enrollments are as of September 30, 1975 as reported in Alberta Education, The Seventy-First Annual Report - April 1, 1975 to March 31, 1976.

ON-SITE INTERVIEWS OF SPECIAL EDUCATION TEACHERS REGARDING TRANSFER OF PUPILS TO AND FROM SPECIAL PROGRAMS

Who decides about placement and removal of pupils from special programs?

How adequate are present arrangements?

Present Arrangements For Transfer Of Pupils

Special class teachers were also asked for their perceptions of relative involvement of teachers, administrators/consultants and parents in the placement and removal of pupils from special programs. Teachers are seen as making the decisions affecting the largest proportion of pupils, next administrators/consultants, and last parents regardless of whether it is a transfer in or placement and regardless of rural/urban and project status (Table 60). This pattern was still apparent when ratings were compared according to teaching position with the exception that: administrators and consultants were seen as making the decisions affecting the largest proportion of pupils by itinerant resource teachers (both for transfers and placement), teachers of segregated classes (transfers in only) and learning assistance centre teachers (transfers in only). For the transfer in situation LAC teachers saw teachers as the decision-maker affecting the smallest proportion of pupils (Table 61). In addition, they were asked to comment on the adequacy of present arrangements. Of all teachers taken together 47.1% reported arrangements for transfers in adequate with 33.3% very adequate, and 42.8% reported arrangements for transfers out adequate and 35.5% very adequate (Appendix M).

No significant differences were found between adequacy of ratings for transfers in or out when ratings were compared according to teaching position; level of training; rural, urban and project status, or total teaching experience.

The open-ended comments (Appendix M) supported the adequacy ratings; and suggested greater involvement of both educators and parents.

Table 60

Transfer In of Pupils or Placement in Special Classrooms: Special Class Teachers' Perceptions of Relative Involvement of Teachers, Administrators/ Consultants: Comparisons by Rural / Urban and Project Status

Teacher Group Reporting	Decision-maker	Summary Statistics			
		Transfer In		Transfer Out	
		$\bar{x}$	SD	$\bar{x}$	SD
All Teachers (N=138)	Teachers	4.3	1.38	4.7	0.95
	Admin/Consul	3.9	1.65	3.5	1.86
	Parents	2.5	1.74	2.1	1.62
Zone 1 (N=11)	Teachers	4.5	1.21	4.4	1.29
	Admin/Consul	2.2	1.75	2.1	1.66
	Parents	1.3	0.48	1.4	0.97
Rural, Small-Urban (N=86)	Teachers	4.3	1.39	4.7	0.98
	Admin/Consul	3.9	1.69	3.8	1.87
	Parents	2.3	1.63	2.0	1.52
Large Urban (N=52)	Teachers	4.3	1.38	4.7	0.90
	Admin/Consul	4.0	1.59	3.7	1.83
	Parents	2.8	1.91	2.5	1.81
LAC & LAFS (N=21)	Teachers	4.7	0.97	3.7	0.98
	Admin/Consul	3.4	1.97	2.9	2.00
	Parents	1.4	0.98	1.5	1.18
LAFS (N=12)	Teachers	5.0	0.00	5.0	0.00
	Admin/Consul	4.2	1.69	3.4	2.07
	Parents	1.5	1.27	1.4	1.33

The $\bar{x}$'s may be interpreted using this scale
1 - nil or very few, 2 - less than 25%, 3 - 25 to 49%,
4 - 50 to 74%, 5 - 75 to 100%

Table 61

Transfer In of Pupils or Placement in Special Classrooms: Special Class Teachers' Perceptions of Relative Involvement of Teachers, Administrators/ Consultants: Comparisons by Teaching Position

Teacher Group Reporting	Decision-maker	Summary Statistics			
		Transfer In		Transfer Out	
		$\bar{x}$	SD	$\bar{x}$	SD
All Teachers (N=138)	Teachers	4.3	1.38	4.7	0.95
	Admin/Consul	3.9	1.65	3.5	1.86
	Parents	2.5	1.74	2.1	1.62
Itinerant Resource Teachers (N=6)	Teachers	3.0	2.31	3.2	2.05
	Admin/Consul	4.2	1.79	4.0	2.00
	Parents	3.0	2.31	1.0	0.00
Half-Time (or less) Resource Teachers (N=34)	Teachers	4.8	0.81	4.8	0.97
	Admin/Consul	3.5	1.77	3.2	1.90
	Parents	2.2	1.70	1.9	1.53
Resource Teachers More than half-time (N=73)	Teachers	4.5	1.11	4.8	0.72
	Admin/Consul	3.9	1.68	3.5	1.87
	Parents	2.5	1.71	2.2	1.63
Teacher of Segregated Special Classes (N=16)	Teachers	2.8	1.79	4.5	1.24
	Admin/Consul	4.4	1.24	3.8	1.83
	Parents	2.5	1.88	2.8	1.93
Learning Assistance Centre Teachers (N=8)	Teachers	3.0	2.31	4.8	0.41
	Admin/Consul	4.6	0.89	4.3	1.50
	Parents	3.5	1.92	2.0	2.00

The $\bar{x}$'s may be interpreted using this scale
1 - nil or very few, 2 - less than 25%, 3 - 25 to 49%,
4 - 50 to 74%, 5 - 75 to 100%

BIBLIOGRAPHIES

BIBLIOGRAPHY FOR PART I

Barlow, B. Teachers for the handicapped. Compact, 1971, 5, 43-46.

Blatt, B. Public policy and the education of children with special needs. Exceptional Children, 1972, 38, 537-545.

Council for Exceptional Children. Standards for Educators of Exceptional Children in Canada. Toronto: National Institute on Mental Retardation, 1971.

Chalfant, J. Factors Related to Special Education Services. Washington, D.C.: The Council for Exceptional Children, 1967.

Commission on Emotional and Learning Disorders in Children. One Million Children. Crainford. Toronto, Ont.: 1970.

Cooley, Wm. W. & Lohnes, P. Multivariate Data Analysis. New York: John Wiley & Sons, Inc., 1971.

Cruickshank, W. M. The exceptional child in elementary and secondary schools, in W. M. Cruickshank and G. O. Johnson (Eds.) Education of Exceptional Children and Youth. Englewood Cliffs, N.J.: Prentice - Hall, 1958.

Department of Education of Saskatchewan. Annual Report, 1971-1972. Regina, Sask.: The Queen's Printer, 1973.

Dunn, L. M. Exceptional Children in the Schools: Special Education in Transition. Toronto: Holt, Rinehart and Winston, 1973.

Draper, N. R. & Smith, H. Applied Regression Analysis. New York. Wiley & Sons, 1966, 178-194.

Fitzwater, C. O. State School System Development: Patterns and Trends. Denver: Education Commission of the States, 1968.

Graham, R. Responsibility of public education for exceptional children. Exceptional Children, 28, 1962, 255-259.

Guarino, R., and Sage, D. Support in the private sector: The effects of one legislative provision. Exceptional Children, 1972, 38, 745-749.

Henderson, R. A. Summary and Extension of Testimony presented to the Illinois House Education Committee Regarding HB-1407, mimeo, University of Illinois Department of Special Education, 1965.

Hurder, W. P. and Hurder, A. J. The Delivery of Services to Children: A Theoretical Analysis. (Unpublished manuscript), 1973.

Kakalik, J. S., Brewer, G. D., Dougharty, L. A., Fleishauer, P. D., Genensky, S. M. & Wallen, L. M. Improving Services to Handicapped Children. Santa Monica, CA: The Rand Corporation, 1974.

Lewchuk, J. K. A Survey of Special Education in Saskatchewan, 1971-72, as Perceived by Superintendents of Education. Unpublished Master's Thesis, University of Saskatchewan, Saskatoon, 1973.

Lucas, C. J. The use and abuse of educational categories, in Proceedings of the Missouri Conference on the Categorical/Non-Categorical Issue in Special Education. Columbia, Mo.: University of Missouri, 1971, 14-22.

Marshman, L. R. Factors related to the size and diversity of special education programs. (Doctoral dissertation, University of Texas), Ann Arbor, Mich.: University Microfilms, 1972, No. 73-18465.

Mclure, Wm. P. and Pence, A. M. Early Childhood and Basic Elementary and Secondary Education: Needs, Programs, Demands, and Costs. Urbana, Illinois: Department of Educational Administration, NEFP, 1970.

Rawlyk, S. L. Delivery of Special Education Services in Saskatchewan. (Doctoral dissertation, University of Illinois), Ann Arbor, Mich.: University Microfilms, 1974, No. 75-11669.

Reynolds, M. C. Policy statements: Call for response. Exceptional Children, 1971, 37, 421-433.

Rossmiller, R. A., Hale, J. A. and Frohreich, L. E. Educational Programs for Exceptional Children: Resource Configuration and Costs. Madison, Wisc.: Department of Educational Administration, NEFP, 1970.

Vergason, G. A. Application of the concept of accountability to special education in rural areas. Paper presented at the C.E.C. Conference on Emerging Models of Special Education for Sparsely Populated Areas. Memphis, Tenn., Dec. 1-4, 1971.

Weatherman, R. F. Administrative designs for special education services in sparsely populated areas. Paper presented at the C.E.C. Conference on Emerging Models of Special Education for Sparsely Populated Areas. Memphis, Tenn., Dec. 1-4, 1971.

Weintraub, F., and Abeson, A. An Assessment of the Extent and Nature of Delaware's Educational Efforts for Handicapped Children. Unpublished report for the Department of Public Instruction, Denver, Del., 1971.

Zneimer, L. The private residential program as another alternative of state institutions. Exceptional Children, 1973, 39, 329-333.

BIBLIOGRAPHY FOR BACKGROUND AND PART II

Adams, M. L. The St. Louis public schools reading clinics: A follow-up study. (Doctoral dissertation, St. Louis University), Ann Arbor, Mich.: University Microfilms, 1960, NO. 61-00741.

Ainsworth, S. H. et al. An exploratory study of educational social and emotional factors in the education of mentally retarded children in Georgia public schools. ERIC Clearing House, 1959, ED 002 801.

Bacher, J. H. The effect of special class placement on the self-concept, social adjustment and reading growth of slow learners. (Doctoral dissertation), Ann Arbor, Mich.: University Microfilms, 1965, No. 25-7071.

Bennett, A. A comparative study of sub-normal children in the elementary grades. New York City: Teachers College, Columbia University, 1932.

Bienert, N. W. Effects of criterion-referenced tests and a computer-management system on the reading achievement of elementary school children. (Unpublished Doctoral dissertation, University of Oregon), 1977.

Blackman, L. S., & Heintz, P. The mentally retarded. Review of Educational Research, 1966, 36, 5-36.

Blatt, B. The physical, personality, and academic status of children who are mentally retarded attending special classes as compared with children who are mentally retarded attending regular classes. American Journal of Mental Deficiency, 1958, 62, 810-818.

Blatt, B., & Garfunkel, F. Teaching the mentally retarded. In Travers, R. M. W. (Ed.) Second Handbook of Research on Teaching, Chicago: Rand McNally, 1973, 632-688.

Bradfield, R. H., Brown, J., Kaplan, F., Rickert, E., & Stannard, R. The special child in the regular classroom. Exceptional Children, 1973, 39 (5), 384-390.

Brigadoon Project. Handicapped and normal children learning together. Summary of project, ERIC Clearing House, 1973, ED 088 262.

Brown, L. F. The special class: some aspects for special education to ponder. Education and Training of the Mentally Retarded, 1968, 3 (1), 11-15.

Brown, L. G. A comparison of educational attainment between mentally retarded children in a school district operating adequate special classes and mentally retarded children in a school district with insufficient special classes. (Doctoral dissertation, Iowa University), Ann Arbor, Mich.: University Microfilms, 1961, No. 61-5550.

Campbell, D. T., & Stanley, J. C. Experimental and Quasi-Experimental Designs for Research. Chicago: Rand McNally & Company, 1966.

Carroll, A. The effects of segregated and partially integrated school programs on self concept and academic achievement of educable mentally retarded children. Exceptional Children, Oct. 1967, 93-100.

Cassidy, V. M., & Stanton, J. E. An investigation of factors involved in the educational placement of mentally retarded children. ERIC Clearing House, 1959, ED 002 801.

Cegelka, W. J. & Tyler, J. L. The efficacy of special class placement for the mentally retarded in proper perspective, Training School Bulletin, 67 (1), 1970, 33-68.

Davis, E. E. A comparison of the first year academic achievement of educable mentally retarded children enrolled in middle school resource and self-contained classrooms. (Doctoral dissertation, Alabama University), Ann Arbor, Mich.: University Microfilms, 1972, No. 73-07994.

Dryden, L. J., Nygaard, M. H. & Taerum, T. V. A summative evaluation report of the High Prairie school division #48 compensatory education program. Calgary, Alberta: Alberta Evaluation Research Associates Ltd., 1976.

Elenbogen, M. L. A comparative study of some aspects of academic and social adjustment of two groups of mentally retarded children in special classes and in regular classes. (Doctoral dissertation, Northwestern University), Ann Arbor, Mich.: University Microfilms, 1957, No. 23-562.

Flynn, T. M. The effects of a parttime special education program on the adjustment of EMR students. Exceptional Children, 1970, 36 (9), 680-681.

Gampel, D., Gottlieb, J., & Harrison, R. Comparison of classroom behavior of special class EMR integrated EMR low I.Q. and non-retarded children. American Journal of Mental Deficiency, 1974, 79 (1), 16-21.

Gardner, W. L. Social and emotional adjustment of mildly retarded children and adolescents: critical review. Exceptional children, 1966, 33, 97-105.

Glavin, J. P., Quay, H. C., Annesley, R. R. & Werry, J. S. An exceptional resource room for behavior problem children. Exceptional Children, 1971, 38, 131-137.

Glavin, J. Behaviorally oriented resource rooms: a follow-up. Journal of Special Education, 1974, 8 (4), 337-347.

Goldberg, J., Kysela, G. & White, L. Special education and the regular classroom. Elements, March, 1973

Goldstein, H. Mentally retarded children in special programs. Journal of Education, 1964, 147, 95-100.

Goldstein, H., Moss, J., & Jordan, L. J. The efficacy of special class training on the development of mentally retarded children. Washington D.C.: Department of Health, Education and Welfare Office of Education, 1965

Goodman, H., Gottlieb, J. & Harrison, R. H. Social acceptance of EMR's integrated into a non-graded elementary school. American Journal of Mental Deficiency, 1972, 76, 412-417.

Gotlieb, J., & Budoff, M. Attitudes toward school by segregated and integrated children: A study and experimental validation. Studies in Learning Potential, 2, (35), Cambridge Mass.: Research Institute For Educational Problems, 1972, 10pp.

Gottlieb, J., Hutten, L., & Budoff, M. A preliminary evaluation of the academic achievement and social adjustment of EMR's in a non-graded school placement. Studies in Learning Potential, 2 (23), Cambridge, Mass.: Research Institute for Educational Problems, 1971, 29pp.

Green, L. G. Comparison of school attainments. Special Education, 1969, 58 (2), 9-12.

Guskin, S. L., & Chaires, M. C. Implications of research on peer acceptance. Education and Training of the Mentally Retarded, 1966, 1, 185-189.

Guskin, S. L., & Spricker, H. H. Educational research in mental retardation, in Ellis, N.R. (Ed.) International Review of Research in Mental Retardation, 3, New York: Academic Press, 1968, 217-278.

Horing, N. G., & Phillips, E. L. Educating emotionally disturbed children. Toronto: McGraw-Hill Book Company Inc., 1962.

Hewett, F. M., Taylor, F. D., & Artuse, A. A. The Santa Monica project. Exceptional Children, 1968, 34, 387.

Hoeltke, G. M. Effectiveness of special class placement for educable mentally retarded children. (Doctoral dissertation, University of Nebraska Teachers College), Ann Arbor Mich.: University Microfilms, 1966, No. 67-3432.

Iano, R. P. Shall we disband special classes? Journal of Special Education, 6 (2), Summer 1972, 167-177

Jackson, N. How reliable are the follow-ups? Special Education, 1966, 55 (1), 4-6.

Johnson, G. O. & Kirk, S. A. Are mentally handicapped children segregated in thr regular grades? Exceptional Children, 1950, 17, 65-68, 87-88.

Johnson, G. O. A comparative study of the personal and social adjustment of mentally handicapped children placed in special classes with mentally handicapped children who remain in regular classes. Syracuse, N.Y.: Syracuse University Research Institute, 1961.

Johnson, G. O. Special education for the mentally handicapped --- a paradox. Exceptional children, 1962, 29, 62-69.

Jordan, L. J. Verbal readiness training for slow-learning children. Mental Retardation, 1965, 3, 19-22.

Kaplan, M. S. An investigation of the anxiety levels of mentally handicapped children with special consideration of the effects of special education classes. (Doctoral dissertation, Michigan State University), Ann Arbor, Mich.: University Microfilms, 1961, No. 62-365.

Kern, W. H., & Pfaeffle, H. A comparison of social adjustments of mentally retarded children in various educational settings. American Journal of Mental Deficiency, 1962, 67, 407-413.

Kirk, S. A. Research in education. In H. A. Stevens and R. Heber (Eds.) Mental Retardation: A Review of Research. Chicago: The University of Chicago Press, 1964, 57-99.

McKerracher, D. W. The remediation of children with special problems. ATA Special Education Council Newsletter, June, 1972, 2 (2), 8-9.

Meyerowitz, J. H. Self-derogations in young retardates and special class placement. Child Development, 1962, 33, 443-451.

Mooney, T. J. A study of the efficacy of the administrative placement of educable mentally retarded children in various settings when compared on a self-concept scale. (Doctoral dissertation, Syracuse University), Ann Arbor, Mich.: University Microfilms, 1969, No. 70-15234.

Mullen, F. G., & Itkin, W. Achievement and adjustment of educable mentally handicapped children in special classes and in regular grades. Washington, D.C.: Department of Health, Education and Welfare, 1961.

Nowell, W. C. The effectiveness of the learning resource teacher as a treatment component of elementary and secondary education act, Title 1, programs for culturally disadvantaged children. (Doctoral dissertation), Ann Arbor, Mich.: University Microfilms, 1969, No. 70-2129.

Pertsch, C. F. A comparative study of the progress of subnormal pupils in the grades and in special classes. (Doctoral dissertation, Teachers College, Columbia University), 1936.

Porter, R. B. & Milazzo, T. C. A comparison of mentally retarded adults who attended a special class with those who attended regular school classes. Exceptional Children, 1958, 24, 410-412, 420.

Quay, L. C. Academic skills in Ellis, N. R. (Ed.), Handbook of Mental Deficiency. New York: McGraw Hill, 1963, 664-690.

Rhodes, H. C. A comparison of resource rooms and regular classrooms as settings for remediation of academic skills. Tasa, 6 (1), 1976, 27-38.

Rodee, M. W. A study to evaluate the resource teacher concept when used with high level educable retardates at the primary level. (Doctoral dissertation, University of Iowa), Ann Arbor, Mich.: University Microfilms, 1971, No. 71-30485.

Rosenkranz, C. An experimental program for mainstreaming in three types of elementary shcools. Bureau Memorandum, 1972, 13 (3), 14-16.

Rouse, B. G. A comparison of intellectual functioning, academic achievement and self concept of mentally handicapped children in three types of classroom placement. (Doctoral dissertation, Mississippi State University), University Microfilms, 1973, No. 74-02920.

Rubin, R. A., Krus, P., & Balow, E. Factors in special class placement. Exceptional Children, 1973, 39 (7), 525-532

Rubin, E. Z., Simson, C. B. & Betwee, M. C. Emotionally handicapped children and the elementary school. Detroit: Wayne State University Press, 1966.

Rucker, C. N., Howe, C. E. & Snider, B. The participation of retarded children in junior high academic and nonacademic regular classes. Exeptional Children, 1969, 35, 617-623.

Sabatino, D. A. An evaluation of resource rooms for children with learning disabilities. Journal of Learning Disabilities, 1971, 4, 84-93.

Schell, J. S. Some differences between mentally retarded children in special and in regular classes in the schools of Mercer County, Pennsylvania. (Doctoral dissertation, The Pennsylvania State University), Ann Arbor, Mich.: University Microfilms, 1959, No. 59-2913.

Schurr, L. T. & Brookover, W. B. The effect of special class placement on the self-concept of ability of the educable mentally retarded child. Washington D.C.: DHEW, Bureau of Handicapped Children and Youth, 1967.

Seaman, J. H. Self-concept, social acceptance and teacher attitudes related to the treatment of children labelled as perceptually handicapped. (Doctoral dissertation, University of Pittsburgh), Ann Arbor, Mich: University Microfilms, 1973, No. 74-15633.

Sheare, J. B. Social acceptance of EMR adolescents in integrated programs. American Journal of Mental Deficiency, 1974, 78, 678-682.

Silberberg, N. E., & Silberberg, M. C. Myths in remedial education. Journal of Learning Disabilities, 1969, 2 (4), 209-217.

Smith, H, & Kennedy, W. Effects of three educational programs on mentally retarded children, Perceptual and Motor Skills, 1967, 24, 174.

Sparks, H. L., & Blackman, L. S. What is special about special education - revisited: The mentally retarded. Exceptional Children, 1965, 242-247.

Thurstone, T. G. An evaluation of educating mentally handicapped children in special classes and in regular classes. ERIC Clearing House, 1959 ED 002 798.

Tisdal, W. J. Productive thinking in retarded children, Exceptional Children, 1962, 29, 36-41.

Warren, K. An investigation of the effectiveness of educational placement of mentally retarded children in a special class. (Doctoral dissertation, University of Tennessee), Ann Arbor, Mich.: University Microfilms, 1962, No. 62-5580.

Weiner, L. W. An investigation of the effectiveness of resource rooms for children with specific learning disabilities. Journal of Learning Disabilities, 1969, 2, 223-229.

Welch, E. A. The effects of segregated and partially integrated school programs on self concept and academic achievement of educable mental retardates. Exceptional Children, 1967, 93-100.

Wrightstone, J. W., and others. A comparison of educational outcomes under single-track and two-track plans for educable mentally retarded children. Washington, D.C.: DHEW, Office of Education, CRP No. 144, 1959, 299pp.

Zito, R. J., & Bardon, J. I. Achievement motivation among negro adolescents in regular and special education programs. American Journal of Mental Deficiency, 1969, 74, 20-26

BIBLIOGRAPHY FOR PART III

Affleck, J. Q., Lehning, T. W., & Brow, K. D. Expanding the resource concept: the resource school. Exceptional Children, 1973, 39 (6), 446-453.

Balow, B. The long-term effect of remedial reading instruction. The Reading Teacher, 1965, 18, 581-586.

Balow, B. & Blomquist, M. Young adults ten to fifteen years after severe reading disability. Elementary School Journal, 1965, 65, 44-48.

Barksdale, M. W., & Atkinson, A. P. A resource room approach to instruction for the educable mentally retarded. Focus on Exceptional Children, 1971, 3 (4), 12-15.

Blessing, K. (ed) The role of the resource consultant in special education. Washington, D.C.: Council for Exceptional Children, 1968.

Brickell, H. M. Organizing New York for educational change. New York: The Commissioner of Education, 1961.

Budoff, M. Providing special education without special classes. Journal of School Psychology, 1972, 10 (2), 199-205.

Carlson, L. B., & Potter, R. E. Training classroom teachers to provide in-class educational services for exceptional children in rural areas. Journal of School Psychology, 1972, 10 (2), 147-151.

Christie, L. S., McKenzie, H. S., & Burdett, C. S. The consulting teacher approach to special education: inservice training for regular classroom teachers. Focus on Exceptional Children, 1972, 4 (5), 1-10.

Cormany, R. B. Returning special education students to regular classes. Personnel and Guidance Journal, 1970, 59 (8), 641-646.

Deno, E. Special education as developmental capital. Exceptional Children, 1970, 37, 229-237.

Dunn, L. Special education for the mildly retarded - is much of it justifiable? Exceptional Children, 1968, 35 (1), 5-21.

Forell, E. R. No easy cure for reading disabilities. Today's Education, 1976, 62 (2), 34-36.

Grenner, J. M. An inservice training program for preparing regular classroom teachers to maintain mildly handicapped children in a regular classroom. (Doctoral dissertation, University of Southern California), Ann Arbor, Mich.: University Microfilms, 1973, No. 74-05863

Haring, N. W., & Krug, D. A. Placement in regular programs: Procedures and results. Exceptional Children, 1975, 41 (6), 413-417.

Iano, R. P. Shall we disband special classes? Journal of Special Education, 1972, 6 (2), 167-77.

Lilly, S. A training based model for special education. Exceptional Children, 1971, 37, 745-749.

Lilly, M. S. Special education -- a cooperative effort. Theory into Practice, 1975, 14 (2), 82-89.

Lombardi, T. P. Changing institutional structures for effective special education programs. Education and Training of the Mentally Retarded, April, 1972, 7, 99-103.

Lovell, K., Byrne, C., & Richardson, B. A further study of the educational progress of children who had received remedial education. British Journal of Educational Psychology, 1963, 33, 3-9.

Lovell, K., Johnson, E., & Platts, D. A summary of a study of the reading ages of children who had been given remedial teaching, British Journal of Educational Psychology, 1962, 32, 66-71.

McKenzie, H. S., Egner, A. N., Knight, M. F., Perelman, P. F., Schreider, B. M., & Garvin, J. S. Training consulting teachers to assist elementary teachers in the management and education of handicapped children. Exceptional Children, 1970, 37, 137-143.

Martin, E. W. Individualism and behaviorism as future trends in educating handicapped children. Exceptional Children, 1972, 38, 517-526.

Perelman, P., & Fox, W. Training regular classroom teacher program. In Mann, P. H. (Ed) Mainstream Special Education: Issues and Perspectives in Urban Centers. Virginia: The Council for Exceptional Children, 1974.

Rawson, M. B. Developmental language disability: Adult accomplishments of dyslexic boys. Baltimore: The John Hopkins Press, 1968.

Robinson, H. M., & Smith, H. K. Reading clinic clients - ten years after. Elementary School Journal, 1962, 63, 22-27.

Shaw, S. F., & Gillung, T. B. Efficacy of a college course for regular class teachers of the mildly handicapped. Mental Retardation, 1975.

Shotel, J. R., Iano, R. P., & McGettigan, J. F. Teacher attitudes associated with the integration of handicapped children. Exceptional Children, 1972, 677-683.

Silberberg, N. E., & Silberberg, M. C. Myths in remedial education. Journal of Learning Disabilities, 1969, 2 (4), 209-217.

Silver, A. A. & Hagin, R. A. Specific reading disability: A twelve-year follow-up study. American Journal of Orthopsychiatry, 1963, 33, 338-339.

Silver, A. A. & Hagin, R. A. Specific reading disability: Follow-up studies American Journal of Orthopsychiatry, 1964, 34, 95-102.

Stearns, J., & Swenson, S. H. The resource teacher, an alternative to special class placement. Viewpoints, 1973, 49 (1), 1-12.

Sund, M. A. N. A comparison of attitudes of general education teachers in schools with different special education delivery systems, toward the mentally handicapped. (Doctoral dissertation, University of Michigan), Ann Arbor, Mich.: University Microfilms, 1975, No. 75-2045.

Witty, E. P. Training to handle learning and behavioral problems in the regular classroom. Journal of Teacher Education, 1975, 26 (2), 135-138.

Vaac, N. A. Long-term effects of special class intervention for emotionally disturbed children. Exceptional Children, 1972, 15-22.

Vlasak, J. W. Relationships between elementary school principals' skills and attitudes of classroom teachers toward programming for mildly handicapped students within regular classrooms. (Doctoral dissertation, University of Texas), Ann Arbor, Mich.: University Microfilms, 1974, No. 75-04470.

Yates, J. R. Model for preparing regular classroom teachers for mainstreaming. Exceptional Children, 1973, 39 (6), 471-472.

BIBLIOGRAPHY FOR PART V

Achilles, C. M., Hughes, L. W. & Leonard, J. R. Regionalism and cooperation in education. Planning and Changing, 1974, 4 (4), 218-221.

Alberta Education. Seventy-first Annual Report. April 1, 1975 to March 31, 1976.

Chalfant, J. Factors Related to Special Education Services. Washington, D.C.: The Council for Exceptional Children, 1967.

Fain, R. P. Attitudes of school board members toward inter-school district cooperation. (Doctoral dissertation, University of Missouri at Kansas City), Ann Arbor, Mich.: University Microfilms, 1970, No. 71-3698.

Hughes, L. W., Achilles, C. M., Leonard, J. & Spence, D. Educational Cooperatives. U.S. Department of Health, Education and Welfare, Office of Education, #23 of Prep Reports. Washington, D.C., 1970

Pine, P. Shared services and cooperatives. Education Digest, 1972, 37 (8), 25-27.

Prazich, G. D. Impact of inter-district cooperative programs and special education regional consultants efforts on programming for the handicapped in Minnesota. (Doctoral dissertation, University of Minnesota), Ann Arbor, Mich.: University Microfilms, 1972. No. 72-14, 358.

APPENDICES

APPENDIX A

GLOSSARY

GLOSSARY

ITINERANT RESOURCE TEACHER: One who services two or more schools on a travelling basis.

LAC: Learning Assistance Centre - an organization consisting of two educational psychologists, a speech therapist and a reading consultant serving Zone 1 (the Peace River Zone) in north-western Alberta.

LAFS: Learning Assistance Field Service - an organization similar to the LAC but consisting of one school psychologist and three field consultants serving much of Zone 4 (the Central Alberta region) in Alberta.

LEARNING ASSISTANCE CENTRE TEACHER: A teacher in a fixed location in a large urban school system who tutors children sent to the Centre from surrounding schools.

PROJECT STATUS: Refers to respondents in Zone 1 (Served by the LAC) plus that part of Zone 4 served by the LAFS.

RESOURCE TEACHERS (half or full-time): Teachers providing remedial instruction for small groups who are scheduled for the resource room for a portion of the school day (typically 40 to 60 minutes daily).

RURAL STATUS: All school jurisdictions except the four large ones in Calgary and Edmonton.

URBAN STATUS: The four large urban school districts in Calgary and Edmonton; Calgary and Edmonton Public and RCS.

Zone:		
	1	Peace River
	2	North Central (Edmonton non-urban)
	3	North Central (Edmonton non-urban)
	4	Central
	5	South Central (Calgary non-urban)
	6	Southern (Lethbridge Zone)
	7	Edmonton Public
	8	Edmonton RCS
	9	Calgary RCS
	10	Calgary Public

APPENDIX B

THE SAMPLE

: Jurisdictions in the Study

: Survey Form of Numbers of Handicapped Children of School Age

JURISDICTIONS IN THE STUDY

ZONE 1

Peace River School Div. #10
Spirit River School Div. #47
High Prairie School Div. #48
Fairview School Div. #50
Ft. Vermilion School Div. #52
East Smoky School Div. #54
Northland School Div. #61
County of Grande Prairie #1
Grande Prairie S. Dist. #2357
Ft. McMurray S. Dist. #2833
Grovedale School Dist. #4910
Fort Vermillion RCSD #26
Grande Prairie RCSD #28
McLennan RCS Dist. #30
St. Thomas More RCS Dist. #35
Spirit River RCS Dist. #36
Rosary RCS Dist. #37
Peace River RCS Dist. #43
Sexsmith RCSS Dist. #51
High Prairie RCSS Dist. #56
Beaverlodge RCS Dist# 68
Valleyview RCSS Dist. #84
Grimshaw RCSS Dist. #88
Nampa RCSS Dist. #96

ZONE 2

Sturgeon School Division #24
Westlock School Division #37
Bonnyville School Division #46
Lac La Biche School Division #51
County of Thorhild #7
County of Barrhead #11
County of Athabasca #12
County of Smoky Lake #13
County of St. Paul #19
County of Lac St. Anne #28
St. Albert School Dist. #0003
Legal School Dist. #1738
St. Paul School Dist. #2228
Bonnyville School Dist. #2665
Fort McMurray #2883
Biggin Hill S. District #5029
Swan Hill School District #5109

ZONE 2 cont'd..

Fort McMurray RC #32
Cold Lake RCSS Dist. #64
Grande Centre RCSS Dist. #67
Whitecourt RCSS Dist. #94
Westlock RCSS Dist. #110
Thibault CP School Dist. #35
Glen Avon PS School Dist. #5
St. Albert PSS Dist. #0006
St. Paul Reg. School District #1
Bonnyville Reg. School District #4

ZONE 3

Yellowhead School Div. #12
Wainwright School Div. #32
County of Beaver #9
County of Wetaskiwin #10
County of Strathcona #20
County of Two Hills #21
County Vermilion River #34
County of Leduc #25
County of Minburn #27
County of Lamont #30
County of Parkland #31
Wetaskiwin School District #0264
Jasper School District #3063
Devon School District #4972
Can Forces Base Dist. #4986
Grande Cache S. Dist. #5258
Wetaskiwin RCS Dist. #15
St. Martins RCS Dist. #16
Wainwright RCS Dist. #31
Vermilion RCSS Dist. #97
Fort Saskatchewan RCSD #104
Sherwood Park RCS Dist. #105
Drayton Valley RCSSD #111

ZONE 4

Rocky Mountain S. Div. #15
Neutral Hills School Div. #16
Provost School Div. #33
County of Ponoka #3
County of Stettler #6
County of Lacombe #14

ZONE 4 cont'd.....

County of Paintearth #18
County of Camrose #22
County of Red Deer #23
County of Flagstaff #29
Red Deer School Dist. #0104
Camrose School Dist. #1315
Stettler School Dist. #1475
Mynarksi Park S. Dist. #5012
Red Deer RCSS Dist. #0017
Theresetta RCS Dist. #0023
Killam RCSS Dist. #49
Camrose RCSSD #60
Provost RCSS Dist. #65
Ponoka RCSS Dist. #95
Lousana Cons. School Dist. #38

ZONE 5

Berry Creek School Div. #1
Acadia School Div. #8
Rangeland School Div. #9
Starland School Div. #30
Foothills School Div. #38
Calgary School Div. #41
Three Hills School Div. #60
Drumheller Valley S. Div. #62
County of Wheatland #16
County of Mountain View #17
Drumheller RCS Dist. #25
St. Ritas RCS Dist. #27
Assumption RCSS Dist. #50
Bow Corridor Reg. S. Dist. #5

ZONE 6

Cardston School Div. #2
Medicine Hat School Div. #4
Taber School Div. #6
Willow Creek School Div. #28
Pincher Creek School Div. #29
Crowsnest Pass S. Div. #63
County of Vulcan #2
County of Newell #4
County of Warner #5
County of Forty Mile #8
County of Lethbridge #26
Lethbridge School Dist. #0051
Medicine Hat S. Dist. #0076
Stirling School Dist. #647
Brooks School Dist. #2092
Redcliff School Dist. #2283
Waterton Park S. Dist. #4233
Lethbridge RCSS Dist. #0009
St. Michaels RCS Dist. #18
Medicine Hat RCSS Dist. #0021
Taber RCSS Dist. #54
Coaldale RCSS Dist. #73
Picture Butte RCSS Dist. #79
Bow Island RCSS Dist. #82
Barons Cons. School Dist. #8

ZONE 7

Edmonton School Dist. #0002

ZONE 8

Edmonton RCS Dist. #0007

ZONE 9

Calgary RCSS Dist. #0001

ZONE 10

Calgary School Dist. #19

SURVEY OF NUMBERS OF HANDICAPPED CHILDREN OF SCHOOL AGE
1) RECEIVING REMEDIATION IN REGULAR CLASSROOMS OR
2) EXCLUDED FROM SCHOOL

How many pupils are receiving remedial instruction where assistance is provided by the Learning Disabilities Fund (LDF) and the Special Education Teacher Position (SETP) grant? Alberta Education has information regarding the numbers in various types of Special Classes supported by the SETP grant. However, we do not have information concerning the number receiving special remedial help in Regular classrooms and the number of handicapped pupils who are not in school.

Please estimate the number of pupils in your school system who have been provided an individualized remedial program during 1975-76. Please include in your estimate only those pupils for whom the following criteria apply:

1. Diagnosis and/or program planning consultation were provided by personnel at least partly funded by LDF. (e.g. locally employed, contracted, LAC personnel in Zone 1, LAFS in Zone 4).

2. The responsibility for remedial instruction rested with the Regular classroom teacher or the EOF project teacher.

Instructional Arrangement	Number of Pupils
Resource Room	N/A (no estimate required)
Special Class (e.g.Opportunity Room)	N/A (no estimate required)
Other SETP grant arrangements	N/A (no estimate required)
Regular Classroom	*
E.O.F. project remedial classroom	*
Total	

* The estimate includes only those pupils for whom diagnosis and/or program planning were provided by personnel at least partly funded by LDF.

In addition, please estimate the number of handicapped children of school age who did not attend any school or remedial setting during 1975-76. The number is _____.

Thank you for providing the information requested.

Please return to:
Planning and Research Branch
Alberta Education
10th Floor, Executive Building
Edmonton, Alberta

Date_____ Signed_____

Dist. County No. _____ Div. Position_____

APPENDIX C

MASTER CORRELATION MATRIX FOR THE ALBERTA REPLICATION OF THE 1972-73 RAWLYK STUDY

Table 62

Master Correlation Matrix for the Alberta Replication of the 1972-73 Rawlyk Study*

Variables	1	2	3	4	5	6	7	8	9	10
1	1.000	-0.009	0.556	0.252	-0.065	0.074	0.935	0.545	0.305	0.273
2	-0.009	1.000	0.072	0.020	0.583	-0.588	0.038	-0.065	-0.099	-0.049
3	0.556	0.072	1.000	0.543	0.013	0.002	0.441	0.312	0.201	0.182
4	0.252	0.020	0.543	1.000	-0.011	0.016	0.167	0.053	0.077	0.095
5	-0.065	0.583	0.013	-0.011	1.000	-0.964	-0.075	-0.107	-0.248	-0.104
6	0.074	-0.588	0.002	0.016	-0.964	1.000	0.083	0.117	0.234	0.099
7	0.935	0.038	0.441	0.167	-0.075	0.083	1.000	0.554	0.300	0.261
8	0.545	-0.065	0.312	0.053	-0.107	0.117	0.554	1.000	0.175	0.130
9	0.305	-0.099	0.201	0.077	-0.248	0.234	0.300	0.175	1.000	0.409
10	0.273	-0.049	0.182	0.095	-0.104	0.099	0.261	0.130	0.409	1.000
11	0.291	0.046	0.294	0.097	-0.069	0.100	0.289	0.271	0.161	0.300
12	0.321	0.098	0.421	0.090	-0.020	0.029	0.326	0.368	0.192	0.130
13	0.246	0.029	0.242	0.071	0.097	-0.100	0.255	0.214	0.044	0.068
14	-0.054	0.001	0.022	0.023	-0.135	0.191	0.013	0.014	0.027	-0.068
15	-0.078	-0.117	-0.023	-0.053	-0.102	0.118	-0.090	0.029	-0.010	-0.135
16	-0.063	0.104	-0.027	-0.015	0.310	-0.326	-0.059	-0.098	-0.133	-0.084
17	-0.400	-0.003	-0.421	-0.129	0.112	-0.126	-0.405	-0.272	-0.204	-0.224
18	-0.226	0.192	-0.251	-0.121	0.383	-0.410	-0.230	-0.222	-0.254	-0.103
19	-0.204	0.403	-0.213	-0.107	0.430	-0.453	-0.203	-0.290	-0.041	-0.027
21	0.096	0.161	0.012	0.093	0.087	-0.114	0.004	-0.130	0.053	0.074
22	0.084	-0.102	0.116	0.050	0.068	0.028	0.016	-0.046	-0.059	-0.024
23	-0.107	0.306	-0.145	-0.046	0.433	-0.440	-0.100	-0.075	-0.310	-0.120
24	-0.151	-0.091	0.013	0.072	-0.053	0.047	-0.075	0.034	-0.168	0.070
25	-0.048	0.005	-0.062	-0.029	-0.082	0.096	-0.037	-0.011	-0.016	0.009
26	-0.073	-0.094	-0.008	-0.067	-0.081	0.059	-0.068	0.014	0.037	-0.126
27	-0.052	-0.030	0.048	0.001	-0.096	0.054	-0.055	-0.136	0.327	0.089
28	-0.079	-0.109	-0.112	-0.066	-0.133	0.167	-0.070	-0.062	0.077	-0.020
29	0.761	-0.016	0.307	-0.020	-0.024	0.026	0.577	0.364	0.189	0.166
30	0.542	-0.023	0.453	0.712	-0.007	0.010	0.238	0.139	0.124	0.102
31	0.132	-0.023	0.237	-0.020	-0.037	0.040	0.167	0.063	0.040	0.070
32	0.220	-0.033	-0.018	-0.040	-0.035	0.041	0.350	0.130	0.186	0.093
33	-0.370	0.017	-0.305	-0.330	0.300	-0.065	-0.366	-0.468	-0.262	-0.237
34	0.376	-0.017	0.305	0.330	-0.300	0.065	0.366	0.468	0.262	0.237
35	0.110	0.132	0.071	0.022	-0.196	0.190	0.131	0.043	0.525	0.148
36	-0.110	-0.132	-0.071	-0.022	0.196	-0.190	-0.131	-0.043	-0.525	-0.148
37	-0.325	-0.222	-0.385	-0.225	0.037	-0.061	-0.339	-0.220	-0.143	-0.215
38	-0.018	0.197	0.092	0.100	-0.301	0.312	-0.012	0.040	0.027	0.125
39	0.344	0.008	0.363	0.241	-0.067	0.079	0.361	0.343	0.220	0.184

* a correlation of .195 or greater is required for significance at $\alpha = .05$

Table 62 cont'd.

Variables	11	12	13	14	15	16	17	19	20
1	0.291	0.321	0.246	-0.054	-0.078	-0.063	-0.400	-0.226	-0.204
2	0.046	0.098	0.028	0.061	-0.117	0.194	-0.003	0.192	0.403
3	0.284	0.321	0.242	0.022	-0.023	-0.027	-0.421	-0.251	-0.213
4	0.097	0.090	0.071	0.023	-0.053	-0.015	-0.129	-0.121	-0.107
5	-0.069	-0.020	0.097	-0.135	-0.102	0.310	0.112	0.383	0.420
6	0.100	0.029	-0.100	0.191	0.118	-0.326	-0.126	-0.410	-0.453
7	0.289	0.326	0.255	0.013	-0.090	-0.059	-0.405	-0.230	-0.203
8	0.271	0.368	0.214	0.014	0.029	-0.098	-0.272	-0.222	-0.290
9	0.161	0.192	0.044	0.027	-0.010	-0.133	-0.204	-0.254	-0.041
10	0.300	0.130	0.068	-0.068	-0.135	-0.084	-0.234	-0.103	-0.027
11	1.000	0.519	0.145	0.161	-0.103	-0.122	-0.361	-0.253	-0.129
12	0.519	1.000	0.493	0.184	-0.236	0.038	-0.316	-0.276	-0.124
13	0.145	0.493	1.000	-0.026	-0.218	0.082	-0.204	-0.059	-0.037
14	0.161	0.184	-0.026	1.000	0.131	0.025	0.046	-0.229	-0.118
15	-0.103	-0.236	-0.218	0.131	1.000	0.063	0.091	-0.236	-0.079
16	-0.122	0.038	0.082	0.025	0.063	1.000	0.036	0.031	0.135
17	-0.361	-0.316	-0.204	0.046	0.091	0.036	1.000	0.304	0.247
19	-0.253	-0.276	-0.059	-0.229	-0.236	0.031	0.304	1.000	0.535
20	-0.129	-0.124	-0.037	-0.118	-0.079	0.135	0.247	0.535	1.000
21	0.053	0.166	0.118	-0.070	-0.060	-0.035	-0.082	0.149	0.147
22	0.058	-0.026	0.003	-0.131	0.054	-0.105	-0.146	-0.084	-0.005
23	-0.184	-0.190	-0.049	-0.171	-0.305	0.086	0.186	0.800	0.099
24	0.090	0.100	0.010	-0.050	-0.150	0.070	-0.051	-0.081	0.131
25	0.058	0.052	0.110	0.062	-0.008	-0.104	-0.124	-0.167	-0.000
26	-0.084	-0.286	-0.195	0.034	0.797	-0.014	0.111	-0.053	0.042
27	-0.040	0.117	0.151	-0.077	-0.246	-0.062	-0.068	-0.117	0.005
28	0.040	0.079	-0.121	0.204	-0.038	0.025	0.095	-0.309	-0.183
29	0.175	0.170	0.145	-0.071	-0.028	-0.033	-0.172	-0.103	-0.097
30	0.130	0.109	0.067	-0.011	-0.028	0.017	-0.172	-0.103	-0.097
31	0.125	0.156	0.164	-0.036	-0.080	-0.028	-0.172	-0.103	-0.097
32	0.099	0.104	0.097	-0.030	-0.162	-0.066	-0.129	-0.127	-0.104
33	-0.257	-0.292	-0.254	0.035	0.109	0.038	0.348	0.209	0.197
34	0.257	0.292	0.254	-0.035	-0.109	-0.038	-0.348	-0.209	-0.197
35	0.110	0.147	-0.077	0.096	0.083	-0.190	-0.277	-0.163	0.002
36	-0.110	-0.147	0.077	-0.096	-0.083	0.190	0.277	0.163	-0.002
37	-0.311	-0.355	-0.134	-0.131	-0.061	0.038	0.416	0.231	0.146
38	0.171	0.190	-0.043	0.158	0.130	-0.076	-0.141	-0.090	-0.020
39	0.283	0.331	0.329	-0.034	-0.115	-0.031	-0.533	-0.275	-0.240

Table 62 cont'd.

Variables	21	22	23	24	25	26	27	28	29	30
1	0.009	0.084	-0.107	-0.051	-0.048	-0.073	-0.052	-0.079	0.761	0.362
2	0.161	-0.102	0.306	-0.091	0.005	-0.084	-0.030	-0.105	-0.018	-0.023
3	0.012	0.116	-0.145	0.013	-0.052	-0.008	0.048	-0.112	0.307	0.653
4	0.093	0.050	-0.046	0.072	-0.029	-0.087	0.001	-0.066	-0.020	0.712
5	0.087	0.068	0.433	-0.053	-0.092	-0.061	-0.096	-0.133	-0.024	-0.007
6	-0.114	0.028	-0.440	0.047	0.096	0.058	0.054	0.167	0.026	0.010
7	0.004	0.016	-0.100	-0.075	-0.037	-0.068	-0.055	-0.070	0.577	0.238
8	-0.130	-0.046	-0.075	0.034	-0.011	0.014	-0.136	-0.062	0.364	0.139
9	0.053	-0.059	-0.310	-0.168	-0.016	0.037	0.327	0.077	0.189	0.124
10	0.074	-0.024	-0.120	0.070	0.009	-0.126	0.089	-0.020	0.166	0.108
11	0.093	0.098	-0.184	0.090	0.058	-0.094	-0.040	0.040	0.135	0.130
12	0.166	-0.026	-0.190	0.100	0.052	-0.286	0.117	0.079	0.179	0.109
13	0.118	0.003	-0.049	0.010	0.110	-0.105	0.151	-0.121	0.145	0.067
14	-0.070	-0.131	-0.171	-0.050	0.062	0.034	-0.077	0.204	-0.071	-0.011
15	-0.060	0.054	-0.305	-0.150	-0.008	0.797	-0.246	-0.038	-0.028	-0.028
16	-0.035	-0.105	0.086	0.070	-0.104	-0.014	-0.062	0.025	-0.033	0.017
17	-0.082	-0.146	0.186	-0.051	-0.124	0.111	-0.068	0.095	-0.172	-0.172
18										
19	0.149	-0.084	0.800	-0.081	-0.167	-0.053	-0.117	-0.309	-0.103	-0.103
20	0.147	-0.005	0.099	0.131	-0.000	0.042	0.005	-0.183	-0.097	-0.097
21	1.000	0.021	0.098	0.018	-0.080	-0.073	-0.103	0.115	0.005	0.005
22	0.021	1.000	-0.195	0.213	0.109	0.011	-0.105	-0.059	0.035	0.056
23	0.098	-0.195	1.000	-0.219	-0.207	-0.196	-0.160	-0.219	-0.040	-0.040
24	0.018	0.213	-0.219	1.000	-0.213	-0.201	-0.164	-0.224	-0.042	-0.042
25	-0.080	0.109	-0.207	-0.213	1.000	-0.191	-0.155	-0.213	-0.039	-0.039
26	-0.073	0.011	-0.196	-0.201	-0.191	1.000	-0.147	-0.201	-0.037	-0.037
27	-0.103	-0.105	-0.160	-0.164	-0.155	-0.147	1.000	-0.164	-0.030	-0.030
28	0.115	-0.059	-0.219	-0.224	-0.213	-0.201	-0.164	1.000	-0.042	-0.042
29	0.005	0.035	-0.040	-0.042	-0.039	-0.037	-0.030	-0.042	1.000	-0.008
30	0.005	0.056	-0.040	-0.042	-0.039	-0.037	-0.030	-0.042	-0.008	1.000
31	-0.01	-0.019	-0.040	-0.042	-0.039	-0.037	-0.030	-0.042	-0.008	-0.008
32	-0.103	0.036	-0.082	-0.084	-0.080	-0.075	0.369	-0.084	-0.016	-0.016
33	0.007	-0.016	0.082	0.084	0.080	0.075	0.061	0.084	-0.494	-0.494
34	-0.007	0.016	-0.082	-0.084	-0.080	-0.075	-0.061	-0.084	0.494	0.494
35	0.148	0.001	-0.182	-0.083	0.052	0.005	0.114	0.081	0.068	-0.113
36	-0.142	-0.001	0.182	0.082	-0.052	-0.005	-0.114	-0.081	-0.068	0.113
37	-0.092	-0.056	0.087	-0.065	-0.012	0.001	0.047	0.059	-0.119	-0.119
38	0.130	-0.038	-0.028	0.141	-0.005	0.064	-0.052	-0.034	-0.055	-0.055
39	-0.007	0.156	-0.128	-0.129	0.120	-0.115	0.004	-0.051	0.323	0.323

Table 62 cont'd

Variables	31	32	33	34	35	36	37	38	39
1	0.138	0.228	-0.876	0.876	0.110	-0.110	-0.325	-0.018	0.646
2	-0.023	-0.003	0.017	-0.017	0.122	-0.122	-0.222	0.197	0.068
3	0.237	-0.018	-0.606	0.606	0.071	-0.071	-0.385	0.092	0.563
4	-0.020	-0.040	-0.330	0.330	0.022	-0.022	-0.228	0.106	0.241
5	-0.037	-0.035	0.060	-0.060	-0.166	0.166	0.037	-0.001	-0.067
6	0.040	0.041	-0.065	0.065	0.190	-0.190	-0.051	0.012	0.075
7	0.167	0.360	-0.866	0.866	0.131	-0.131	-0.339	-0.012	0.661
8	0.063	0.130	-0.468	0.468	0.043	-0.043	-0.220	0.040	0.345
9	0.040	0.186	-0.262	0.262	0.525	-0.525	-0.143	0.027	0.220
10	0.070	0.093	-0.237	0.237	0.148	-0.148	-0.215	0.125	0.184
11	0.128	0.099	-0.257	0.257	0.110	-0.110	-0.311	0.171	0.283
12	0.156	0.104	-0.292	0.292	0.147	-0.147	-0.355	0.190	0.331
13	0.164	0.097	-0.254	0.254	-0.077	0.077	-0.134	-0.043	0.329
14	-0.036	-0.030	0.035	-0.035	0.096	-0.096	-0.131	0.158	-0.034
15	-0.080	-0.162	0.109	-0.109	0.083	-0.083	-0.061	0.130	-0.115
16	-0.028	-0.066	0.038	-0.038	-0.190	0.190	0.088	-0.076	-0.031
17	-0.172	-0.129	0.348	-0.348	-0.277	0.277	0.416	-0.141	-0.533
19	-0.103	-0.127	0.209	-0.209	-0.160	0.163	0.231	-0.090	-0.275
20	-0.097	-0.104	0.197	-0.197	0.002	-0.002	0.146	-0.020	-0.240
21	-0.011	-0.103	0.007	-0.007	0.142	-0.142	-0.092	0.130	-0.057
22	-0.019	0.036	-0.016	0.016	0.001	-0.001	-0.056	-0.028	0.156
23	-0.040	-0.082	0.082	-0.082	-0.182	0.182	0.087	-0.022	-0.125
24	-0.042	-0.084	0.084	-0.084	-0.083	0.082	-0.065	0.141	-0.129
25	-0.039	-0.080	0.080	-0.080	0.052	-0.052	-0.012	-0.055	0.120
26	-0.037	-0.075	0.075	-0.075	0.065	-0.065	0.001	0.064	-0.115
27	-0.030	0.369	0.061	-0.061	0.114	-0.114	0.047	-0.052	0.004
28	-0.042	-0.084	0.084	-0.084	0.081	-0.081	0.059	-0.034	-0.051
29	-0.008	-0.016	-0.494	0.494	0.068	-0.068	-0.119	-0.055	0.323
30	-0.008	-0.016	-0.494	0.494	-0.113	0.113	-0.119	-0.055	0.323
31	1.000	-0.016	-0.494	0.494	-0.113	0.113	-0.119	-0.055	0.323
32	-0.016	1.000	-0.226	0.226	0.137	-0.137	-0.055	-0.013	0.127
33	-0.494	-0.226	1.000	-1.000	0.046	-0.046	0.241	0.111	-0.653
34	0.494	0.226	-1.000	1.000	-0.046	0.046	-0.241	-0.111	0.653
35	-0.113	0.137	0.046	-0.046	1.000	-1.000	-0.403	0.380	0.085
36	0.113	-0.137	-0.046	0.046	-1.000	1.000	0.403	-0.380	-0.085
37	-0.119	-0.055	0.241	-0.241	-0.403	0.403	1.000	-0.853	-0.369
38	-0.055	-0.013	0.111	-0.111	0.380	-0.380	-0.853	1.000	-0.170
39	0.323	0.127	-0.653	0.653	0.085	-0.085	-0.369	-0.170	1.000

APPENDIX D

CHARACTERISTICS OF RESPONDENTS

Table 63

The Teacher Group: Frequencies According to Source of Support Services

Source of Support	Frequency					
	School System	Purchase Contract	School System & Contract	LAC or LAFS	School System & LAC or LAFS	Little or No
Diagnosis	94	10	11	4	17	2
Program Planning	115	0	3	0	15	5
Follow-up Consultation and Pupil Evaluations	113	2	3	1	13	4
Inservice	90	2	13	4	16	12

Table 64

Characteristics and Origin of Students Represented in The Classes of Teachers Interviewed

Characteristic	Frequency									
	1	2	3	4	5	6	7	8	9	10+
No. of home rooms	5	5	5	13	17	18	15	8	6	37
No. of grades represented in the class	5	4	27	16	21	36	6	5	8	0
Grade range in achievement	0	4	20	20	20	12	3	1	1	0
No. of pupils from other school systems	7	3	1	1	0	0	0	0	0	0

Table 65

Description of Sample of Administrators According to Rural-Urban-Project Status and Zone

Rural-Urban-Project Status		Zone 1 (LAC)	Small Urban & Rural	Large Urban	LAC & LAFS	LAFS	Total
	N	19	141	41	33	17	182

Table 66

Description of Sample of Administrators According to Source of Diagnosis

Source of Diagnosis		Almost Entirely Provided by		Shared By		Total
		School System	Purchase of Service or Contract	School System & Contract Personnel	School System & LAC or LAFS	
	N	102	11	36	39	182

APPENDIX E

SPECIAL CLASS TEACHERS' WILLINGNESS TO PROVIDE ASSISTANCE

Table 67

Analysis of Variance of Special Teachers' Willingness to Provide Assistance to Others: Comparisons by Zone

Source	df	SS	MS	F
Between Groups	9	914.2	101.58	1.24
Within Groups	128	10,401.3	82.04	
Total	137	11,415.5		

Table 68

Special Class Teachers' Perceptions of Their Willingness to Perform As Resource Worker with Other Teachers: Comparisons of Means (Averages) by Rural - Urban - Project Status

Aspect of Service to Others	Zone Clusters					
	LAC Zone 1	Small Urban and Rural	Large Urban	LAC and LAFS	LAFS	Total
N	11	86	52	21	11	138
Special Teachers' Willingness to Provide Service $\bar{x}$	28.09	36.79	34.25	39.38	40.82	35.83
SD	3.78	8.74	10.33	8.36	11.03	9.41

Note: $\bar{x}$ = mean or average; SD = standard deviation or variability
The means may be interpreted according to this scale.

Willingness to Provide Service

9 - very unwilling
18 - unwilling
27 - sometimes willing, sometimes unwilling
36 - willing
45 - very willing

Table 69

Analysis of Variance of Special Class Teachers' Willingness to Provide Assistance to Others: Comparisons According to University Courses Completed in Special Education and Related Subjects

Source	df	SS	MS	F
Between Groups	3	151.4	50.48	0.56
Within Groups	134	11,989.8	89.48	
Total	137	12,141.2		

Table 70

Special Class Teachers' Perceptions of Their Willingness to Assist Others: Comparisons by University Preparation

	Number of Courses in Special Education & Related Subjects			
	More than Five	Four or Five	Two or Three	None or One
N	53	26	28	31
$\bar{x}$	36.9	35.5	34.1	35.9
SD	8.93	8.99	11.42	8.76

Note: $\bar{x}$ = mean or average. It may be interpreted as follows:

9 - very unwilling
18 - unwilling
27 - sometimes willing, sometimes unwilling
36 - willing
45 - very willing

APPENDIX F

SPECIAL CLASS TEACHERS' PERCEPTIONS OF OTHER TEACHERS' WILLINGNESS TO RECEIVE SERVICE

Table 71

Special Class Teachers' Perceptions of Other Teachers' Willingness to Receive Service Comparisons by Service Area (N=138)

Service Area	Responses in five-point rating scale					Summary Statistics	
	1	2	3	4	5	$\bar{x}$	SD
Behaviour & Social-Emotional							
Frequency	1	2	47	55	26	3.79	0.80
Percent	0.7	1.5	34.1	39.9	18.8		
Reading							
Frequency	2	4	36	56	32	3.86	0.88
Percent	1.5	2.9	26.1	40.6	23.2		
Listening							
Frequency	2	8	45	53	19	3.62	0.87
Percent	1.5	5.8	32.6	38.4	13.8		
Writing							
Frequency	3	6	40	60	17	3.65	0.86
Percent	2.2	4.4	29.0	43.5	12.3		
Speaking							
Frequency	4	8	35	56	22	3.67	0.95
Percent	2.9	5.8	25.4	40.6	15.9		
Arithmetic							
Frequency	4	5	30	51	22	3.73	0.95
Percent	2.9	3.6	21.7	37.0	15.9		
Perception & Motor							
Frequency	6	6	36	55	23	3.66	1.09
Percent	4.4	4.4	26.1	39.9	16.7		
Follow-up Consultation							
Frequency	1	1	28	57	44	4.08	0.80
Percent	0.7	0.7	20.3	41.3	31.9		
Providing In-service							
Frequency	4	7	28	55	31	3.82	0.98
Percent	2.9	5.1	20.3	39.9	22.5		

The average ($\bar{x}$ s) may be interpreted as follows:
Teachers' Willingness to Receive Service: 1 - Very unwilling, 2 - Unwilling, 3 - Sometimes willing, sometimes unwilling, 4 - Willing, 5 - Very Willing

Table 72

Special Class Teachers' Perceptions of other Teachers' Willingness to Receive Service: Comparisons of Means (Averages) by Rural, Urban and Project Status

Aspects of Service to Others		Zone Clusters					
		LAC Zone 1	Small Urban and Rural	Large Urban	LAC and LAFS	LAFS	TOTAL
Other Teachers' Willingness to Receive Service	N	11	86	52	21	11	138
	$\bar{X}$	31.55	31.31	30.29	32.05	32.82	30.93
	SD	8.21	8.91	9.66	9.51	10.64	9.17

Table 73

Special Class Teachers' Perceptions of other Teachers' Willingness to Receive Service: Comparisons of Means (Averages) According to Total Teaching Experience

Total Teaching Experience	N	$\bar{X}$	SD
5 years or more	89	31.21	9.12
2 to 4 years	34	20.37	10.48
1 year or less	15	30.73	6.39

APPENDIX G

FREQUENCY OF SPECIAL CLASS TEACHERS' ASSISTANCE TO OTHER TEACHERS

Table 74

Analysis of Variance of Special Teachers' Perceptions of Frequency of their Service to Others: Comparisons by Zones

Source	df	SS	MS	F
Between groups	9	914.2	101.58	1.24
Within groups	128	10,501.3	82.04	
Total	137	11,415.5		

Table 75

Special Class Teachers' Perceptions of the Frequency of Their Assistance to Other Teachers: Comparisons of Means (Averages) by Rural, Urban and Project Status

Aspect of Service to Others		Zone Clusters					
		LAC (Zone 1)	Small Urban and Rural	Large Urban	LAC & LAFS	LAFS	Total
Frequency of service	N	11	86	52	21	11	138
	$\bar{x}$	24.5	25.2	22.5	26.3	28.7	24.2
	SD	8.63	8.81	9.49	9.77	10.61	9.13

Note: $\bar{x}$ = mean or average; SD = standard deviation or variability
The means may be interpreted to this scale:

Frequency of Service

9 - Rarely, Never
18 - Infrequently
27 - Sometimes
36 - Frequently
45 - Very Frequently

Table 76

Special Class Teachers' Perceptions of the Frequency with Which They Assist Others: According to University Preparation

		Number of courses			
		5+	4-5	2-3	0-1
University Courses in Special Ed and Related Subjects	N	53	26	28	31
	$\bar{x}$	24.4	24.4	23.9	24.1
	SD	8.98	8.88	9.41	9.75

Table 77

Analaysis of Variance of Special Class Teachers' Perceptions of Freouency of Their Assistance to Others: Comparisons According to University Courses Completed in Special Education and Related Subjects

Source	df	SS	MS	F
Between Groups	3	6.06	2.02	.024
Within Groups	134	11,409.4	85.15	
Total	137	11,415.5		

Table 78

Special Class Teachers' Perceptions of the Frequency with Which They Assist Others: According to Teaching Experience

		Years		
		5	2-4	0-1
Total Teaching Experience	N	89	34	15
	$\bar{x}$	24.9	23.8	21.0
	SD	9.39	9.60	5.44

APPENDIX H

ADEQUACY OF SPECIAL CLASS TEACHERS' ASSISTANCE TO OTHER TEACHERS

ADEQUACY IN DIAGNOSIS

ADEQUACY IN PROGRAM PLANNING

ADEQUACY IN TEACHING

Table 79

Special Class Teachers' Perceptions of Their Adequacy in Providing Service to Other Teachers: Comparisons by Rural, Urban, and Project Status

		Zone Clusters					
		LAC (Zone 1)	Small Urban and Rural	Large Urban	LAC & LAFS	LAFS	Total
Adequacy of Service	N	11	86	52	21	11	138
	$\bar{x}$	29.5	26.5	25.1	28.3	27.8	26.0
	SD	7.80	8.35	10.36	8.46	9.29	9.15

Note: The means may be interpreted according to this scale:

9 - very inadequate
18 - inadequate
27 - sometimes adequate, sometimes inadequate
36 - adequate
45 - very adequate

Table 80

Special Class Teachers' Perceptions of the Adequacy of Their Service to Other Teachers: Comparisons by Service Area (N=138)

Service Area		Responses on five-point rating scale					Summary Statistics	
		1	2	3	4	5	$\bar{x}$	SD
Behaviour & Social Emotional								
	Frequency	5	7	67	44	7	3.32	0.82
	Percent	3.6	5.1	48.6	31.9	5.1		
Reading								
	Frequency	6	7	39	66	10	3.52	0.90
	Percent	4.4	5.1	28.3	47.8	7.3		
Listening								
	Frequency	10	14	51	39	7	3.16	0.99
	Percent	7.3	10.1	37.0	28.3	5.1		
Writing								
	Frequency	9	8	49	48	6	3.28	0.95
	Percent	6.5	5.8	35.5	34.8	4.4		
Speaking								
	Frequency	10	13	51	36	10	3.19	1.02
	Percent	7.3	9.4	37.0	20.1	7.3		
Arithmetic								
	Frequency	12	10	36	39	8	3.20	1.10
	Percent	8.7	7.6	26.1	28.3	5.8		
Perception & Motor								
	Frequency	11	12	51	43	5	3.16	0.99
	Percent	8.0	8.7	37.0	31.2	3.6		
Follow-Up Consultation								
	Frequency	4	3	36	70	17	3.72	0.84
	Percent	2.9	2.2	26.1	50.7	12.3		
Providing Inservice								
	Frequency	16	12	25	44	9	3.17	1.21
	Percent	11.6	8.7	18.1	31.9	6.5		

Note: The ratings scales and averages ($\bar{x}$'s) may be interpreted as follows: Adequacy of Service: 1 - Very Inadequate, 2 - Inadequate, 3 - Sometimes Adequate/sometimes Inadequate, 4 - Adequate, 5 - Very Adequate

Table 81

Special Class Teachers' Perceptions of Their Adequacy in Providing Service to Other Teachers: According to University Preparation

		5+	4-5	2-3	0-1
University Courses in Special Ed and Related Subjects	N	53	26	28	31
	$\bar{x}$	27.4	26.6	23.7	24.9
	SD	9.30	7.67	9.77	9.32

Table 82

Special Class Teachers' Perceptions of Their Adequacy in Providing Service to Other Teachers: According to Source of Diagnostic Support

		School System	Contract	Contract & School System	LAC or LAFS & School System
Source of Support for Diagnosis	N	94	10	11	21
	$\bar{x}$	25.6	22.2	27.9	28.3
	SD	9.53	9.31	5.63	8.46

Table 83

Special Class Teachers' Perceptions of Their Adequacy in Providing Service to Other Teachers: According to Teaching Experience

		5 years	2-4 years	0-1 years
Total Teaching Experience	N	89	34	15
	$\bar{x}$	26.5	25.5	24.1
	SD	9.24	9.48	8.00

Note: The averages in the above tables may be interpreted as follows: 9 - Very Inadequate, 18 - Inadequate, 27 - Sometimes Adequate/ Sometimes Inadequate, 36 - Adequate, 45 - Very Adequate

Adequacy in Diagnosis

Table 84

Analysis of Variance of Special Class Teachers' Self Adequacy Perceptions (Diagnosis): Comparisons by Zones

Source	df	SS	MS	F
Between Groups	9	150.1	16.68	0.75
Within Groups	128	2855.2	22.31	
Total	137	3005.3		

Table 85

Special Class Teachers' Perceptions of Their own Adequacy in Diagnosis: Comparisons Between Groups Designated as Rural, Urban and Project

Designation of Group	N	Mean (average)	Standard Deviation
Zone 1 (LAC)	11	14.6	5.32
Rural, Small-Urban	86	15.2	4.57
Large Urban	52	15.7	4.89
LAC and LAFS	21	15.4	4.15
LAFS	12	15.1	3.68

Note: The means may be interpreted according to the following scales

5 - Very inadequate
10 - Inadequate
15 - Sometimes Adequate/ Sometimes Inadequate
20 - Adequate
25 - Very Adequate

Table 86

Special Class Teachers' Perceptions of Their Own Adequacy in Diagnosis: Comparisons of Groups According to University Preparation

		5+	4-5	2-3	0-1
University Courses in Special Ed and Related Subjects	N	53	26	28	31
	$\bar{x}$	15.9	16.0	15.9	13.4
	SD	4.23	3.68	4.59	5.81

Table 87

Analysis of Variance of Special Class Teachers' Perceptions of Self-Adequacy (Diagnosis): Comparisons by University Courses Completed in Special Education and Related Subjects

Source	df	SS	MS	F
Between Groups	3	154.2	51.41	2.42
Within Groups	134	2,851.1	21.28	
Total	137	3,005.3		

TABLE 88

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR OWN ADEQUACY I'I DIAGNOSIS: COMPARISONS OF GROUPS ACCORDING TO TEACHING POSITION

Category	Variables Within Category			
	Itinerant	Resource Room	Segregated Special	Learning Assistance Centre
Teaching Position				
N	6	107	16	8
$\bar{x}$	16.7	15.0	15.9	17.25
SD	3.93	4.61	5.62	4.46

TABLE 89

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR OWN ADEQUACY IN DIAGNOSIS: COMPARISONS OF GROUPS ACCORDING TO TEACHING EXPERIENCE

		5 years	2-4 years	0-1 years
Total Teaching Experience	N	89	34	15
	$\bar{x}$	15.2	16.2	14.5
	SD	4.53	5.40	3.78

TABLE 90

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR OWN ADEQUACY IN DIAGNOSIS: COMPARISONS OF GROUPS ACCORDING TO SOURCE OF SUPPORT FOR DIAGNOSIS

		School System	Contract	Contract & School System	LAC or LAFS & School System
Source of Support for Diagnosis	N	94	10	11	21
	$\bar{x}$	15.4	15.5	16.2	14.9
	SD	4.89	3.21	3.16	4.88

Note: The averages ($\bar{x}$'s) may be interpreted as follows: 5 - Very Inadequate, 10 - Inadequate, 15 - Sometimes Inadequate/Sometimes Adequate, 20 - Adequate, 25 - Very Adequate.

Adequacy in Program Planning

TABLE 91

ANALYSIS OF VARIANCE OF SPECIAL CLASS TEACHERS' SELF-ADEQUACY PERCEPTIONS (PROGRAM PLANNING): COMPARISONS BY ZONES

Source	df	SS	MS	F
Between Groups	9	99.2	11.02	0.60
Within Groups	28	2,352.7	18.38	
Total	137	2,451.9		

TABLE 92

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR OWN ADEQUACY IN PLANNING REMEDIAL PROGRAMS: COMPARISONS BETWEEN GROUPS DESIGNATED AS RURAL, URBAN AND PROJECT

Designation of Group	N	Mean (Average)	Standard Deviation
Zone 1 (LAC)	11	15.1	5.46
Rural, Small-Urban	86	15.8	4.36
Large Urban	52	16.3	4.04
LAC and LAFS	21	15.6	4.91
LAFS	12	15.1	3.99

Note: The means may be interpreted using this scale:

5 - Very inadequate
10 - Inadequate
15 - Sometimes adequate, sometimes inadequate
20 - Adequate
25 - Very adequate

TABLE 93

SPECIAL CLASS TEACHERS' PERCEPTIONS OF SELF-ADEQUACY IN PLANNING REMEDIAL PROGRAMS: COMPARISONS ACCORDING TO UNIVERSITY COURSES IN SPECIAL EDUCATION AND RELATED SUBJECTS

		5+	4-5	2-3	0-1
University Courses in Special Education and Related Subjects	N	53	26	28	31
	$\bar{x}$	16.8	16.7	16.4	15.8
	SD	4.22	4.78	4.78	4.61

TABLE 94

ANALYSIS OF VARIANCE OF SPECIAL CLASS TEACHERS' PERCEPTIONS OF SELF-ADEQUACY (PROGRAM PLANNING): COMPARISONS ACCORDING TO UNIVERSITY PREPARATION IN SPECIAL EDUCATION AND RELATED SUBJECTS

Source	df	SS	MS	F
Between groups	3	9.5	3.18	0.174
Within groups	134	2,442.4	18.23	
Total	137	2,451.9		

TABLE 95

SPECIAL CLASS TEACHERS' PERCEPTIONS OF SELF-ADEQUACY IN PLANNING REMEDIAL PROGRAMS: COMPARISONS ACCORDING TO TEACHING POSITION

Category		Variables within Category			
		Itinerant	Resource Room	Segregated Special	Learning Assistance Centre
Teaching Position	N	6	107	16	8
	$\bar{x}$	16.2	15.9	16.3	16.6
	SD	4.88	4.11	5.15	4.37

TABLE 96

SPECIAL CLASS TEACHERS' PERCEPTIONS OF SELF-ADEQUACY IN PLANNING REMEDIAL PROGRAMS: COMPARISONS ACCORDING TO TEACHING EXPERIENCE

		5 years	2-4 years	0-1 years
Total Teaching Experience	N	89	34	15
	$\bar{x}$	16.0	16.5	14.7
	SD	4.21	4.41	3.96

TABLE 97

SPECIAL CLASS TEACHERS' PERCEPTIONS OF SELF-ADEQUACY IN PLANNING REMEDIAL PROGRAMS: COMPARISONS ACCORDING TO SOURCE OF SUPPORT FOR DIAGNOSIS

		School System	Contract	Contract & School System	LAC or LAFS School System
Source of Support for Diagnosis	N	94	10	11	21
	$\bar{x}$	16.1	15.4	16.3	15.4
	SD	4.05	5.43	4.13	5.43

Adequacy in Teaching

TABLE 98

ANALYSIS OF VARIANCE OF SPECIAL TEACHERS' PERCEPTION OF THEIR OWN TEACHING ADEQUACY: COMPARISONS BY ZONES

Source	df	SS	MS	F
Between groups	9	68.7	7.63	0.40
Within groups	128	2,419.5	18.90	
Total	137	2,448.1		

TABLE 99

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR ADEQUACY IN TEACHING REMEDIAL PROGRAMS: COMPARISONS BETWEEN GROUPS DESIGNATED AS RURAL URBAN AND PROJECT

Group Designation	N	Mean (Average)	Standard Deviation
Zone 1 (LAC)	11	16.2	6.67
Rural, Small-Urban	86	16.6	4.06
Large Urban	52	16.8	4.62
LAC and LAFS	21	16.6	4.17
LAFS	12	16.0	3.57

Note: The averages may be interpreted by use of this scale:

5 - Very inadequate
10 - Inadequate
15 - Sometimes adequate, sometimes inadequate
20 - Adequate
25 - Very adequate

TABLE 100

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR OWN TEACHING ADEQUACY: ACCORDING TO UNIVERSITY COURSES IN SPECIAL EDUCATION

		5+	4-5	2-3	0-1
University courses in special education and related subjects	N	53	26	28	31
	$\bar{x}$	16.8	16.7	16.7	16.2
	SD	4.42	4.57	3.76	4.33

TABLE 101

ANALYSIS OF VARIANCE OF SPECIAL CLASS TEACHERS' PERCEPTIONS OF THE ADEQUACY OF THEIR OWN TEACHING: COMPARISONS ACCORDING TO UNIVERSITY PREPARATION IN SPECIAL EDUCATION AND RELATED SUBJECTS

Source	df	SS	MS	F
Between groups	3	6.8	2.26	0.122
Within groups	134	2,481.4	18.52	
Total	137	2,488.1		

TABLE 102

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR OWN TEACHING ADEQUACY: ACCORDING TO TEACHING POSITION

Category		Itinerant	Resource Room	Segregated Special	Learning Assistance Centre
Teaching Position	N	6	107	16	8
	$\bar{x}$	14.5	16.5	17.1	19.0
	SD	7.97	3.82	5.44	3.82

TABLE 103

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR OWN TEACHING ADEQUACY:

COMPARISONS OF GROUPS BY TOTAL TEACHING EXPERIENCE

		≥5 years	2-4 years	0-1 years
Total Teaching Experience	N	89	34	15
	$\bar{x}$	16.5	17.4	15.6
	SD	4.33	4.1	4.3

TABLE 104

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR OWN TEACHING ADEQUACY:

COMPARISONS OF GROUPS BY SOURCE OF SUPPORT FOR DIAGNOSIS

		School System	Contract	Contract & School System	LAC or LAFS and School System
Source of Support for Diagnosis	N	94	10	11	21
	$\bar{x}$	16.9	16.5	16.6	16.1
	SD	4.15	2.76	4.23	5.17

TABLE 105

SPECIAL CLASS TEACHERS' PERCEPTIONS OF THEIR OWN TEACHING ADEQUACY:

COMPARISONS OF GROUPS ACCORDING TO SPECIAL EDUCATION TEACHING EXPERIENCE

		5 years	2-4 years	1 year	Nil years
Special Education Teaching Experience	N	29	47	30	32
	$\bar{x}$	17.0	16.4	18.3	15.0
	SD	3.73	4.6	3.57	4.38

Assumptions were tested that 1) university preparation in courses in Special Education and related subjects, 2) total teaching experience, 3) experience teaching special education and 4) perceptions that their administrators were facilitating the consulting role for Resource Room teachers were related to feelings of adequacy in assisting others. The tetrachoric correlation coefficients reported in the next table indicate non-significant relationships between adequacy and university courses and experience teaching special education.

Weak relationships were noted between adequacy and total teaching experience (16 — 24% of the variance explained) and administrators viewed as facilitative (10 — 27% of the variance explained).

Table 106

Relationship of University Preparation and Experience of Resource Room Teachers to Their Feelings of Adequacy in Assisting Others: Tetrachoric Correlation Coefficients (N=~100)

Resource Room Teachers' Background Variable	r_t : Background Variable vs Self-Adequacy in Assisting Other Teachers	
	Follow-up Consultations	Assisting in Inservice
University Courses in Special Education and Related Subjects	.19	- .06
Total Teaching Experience	.49	.40
Experience Teaching Special Education	.09	.25
Administrators' Facilitation of Consulting Role for Resource Room Teachers	.31	.52

Note: - $r_t > .25$ required for significance at $p < .01$

APPENDIX I

ADMINISTRATORS' PERCEPTIONS OF THE SPECIAL CLASS TEACHERS' ROLE IN ASSISTING OTHER TEACHERS

TABLE 107

ADMINISTRATORS' PERCEPTIONS OF SPECIAL CLASS TEACHERS' ROLE AS RESOURCE WORKERS WITH OTHER TEACHERS: COMPARISONS OF MEANS (AVERAGES) BY SELF-PERCEPTION AS FACILITATIVE OR NON-FACILITATIVE

Aspect of Service to Others		Administrators with Self-Perception as Facilitative	Administrators with Self-Perception as Non-Facilitative	Total Administrators
Special teachers willingness to provide service	N	149	33	182
	$\bar{x}$	4.19	4.26	4.20
	SD	1.16	0.81	1.13
Other teachers willingness to receive service	$\bar{x}$	3.77	3.73	3.77
	SD	0.87	0.87	0.87
Frequency of service	$\bar{x}$	3.49	3.11	3.45
	SD	0.86	0.99	0.88
Adequacy of service	$\bar{x}$	3.72	3.89	3.74
	SD	0.88	0.68	0.86

Note: $\bar{x}$ = mean or average; SD = standard deviation or variability
The means may be interpreted according to this scale:

Willingness to Provide or to Receive	Frequency of Service	Adequacy of Service
1. Very unwilling	rarely, never	very inadequate
2. Unwilling	infrequently	inadequate
3. Sometimes willing, sometimes unwilling	sometimes	sometimes adequate, sometimes inadequate
4. Willing	frequently	adequate
5. Very willing	very frequently	very adequate

TABLE 108

ADMINISTRATORS' PERCEPTIONS OF SPECIAL CLASS TEACHERS' ROLE AS RESOURCE WORKER WITH OTHER TEACHERS: COMPARISONS OF MEANS (AVERAGES) BY SOURCE OF DIAGNOSTIC SERVICE

Aspect of Service to Others		Source of Diagnostic Service				
		School System	Contract	Contract & School System	LAC or LAFS & School System	Total
Special teachers willingness to provide service	N	102	11	36	39	192
	$\bar{x}$	4.17	3.60	4.27	4.18	4.20
	SD	1.24	1.58	1.07	0.88	1.13
Other teachers willingness to receive service	$\bar{x}$	3.84	3.80	3.64	3.67	3.77
	SD	0.92	0.92	0.74	0.85	0.87
Frequency of service	$\bar{x}$	3.46	3.50	3.46	3.44	3.45
	SD	0.95	0.85	0.79	0.80	0.88
Adequacy of service	$\bar{x}$	3.74	3.80	3.82	3.63	3.74
	SD	0.92	0.79	0.81	0.75	0.86

Note: $\bar{x}$ = mean or average, SD = standard deviation or variability
The means may be interpreted according to this scale:

Willingness to Provide or to Receive	Frequency of Service	Adequacy of Service
1. Very unwilling	rarely, never	very inadequate
2. Unwilling	infrequently	inadequate
3. Sometimes willing, sometimes unwilling	sometimes	sometimes adequate, sometimes inadequate
4. Willing	frequently	adequate
5. Very willing	very frequently	very adequate

APPENDIX J

OPEN-ENDED COMMENTS BY SPECIAL EDUCATION TEACHERS AND THEIR ADMINISTRATORS

Teachers' Comments on Special Class Teachers' Role as a Consultant

	Frequency
1. Special education teacher is willing, but time is lacking for consultation with other teachers. Time should be programmed.	29
2. Sees need for a resource teacher as a consultant to other teachers. Consulting role by special ed teacher is an integral part of program, both for getting and giving information.	11
3. Contact, communication with other staff members important.	9
4. Lot is done after school hours (recess or lunch).	8
5. Some regular teachers don't understand resource rooms and their purpose.	6
6. Cooperation from other teachers important.	6
7. Willing if requested.	5
8. What is needed is more give and take between the special ed and regular teachers on a personal, informal level (to prevent a threat to the regular teachers).	5
9. This is definitely part of the job. Important for teachers to work closely to teach "the whole child".	4
10. Time constraints because of full class load.	4
11. Sometimes caution has to be used in advising teachers about their programs in the classroom or in suggesting inservice as they see this as criticism of their method.	4
12. Now that the staff are confident of the special ed teacher's role, they are asking for his help. (Growing willingness to accept help).	3
13. Would like to attempt an inservice for regular teachers on staff.	3
14. Much diagnosis and program planning for children not in the special classroom should be done by the special class teacher.	2
15. Consultation time should be scheduled at least at the beginning and end of a child's program with a teacher replacement provided to allow discussion with the homeroom teacher.	2
16. It would be beneficial if regular teachers could see resource rooms in operation.	2
17. Haven't seen this as part of role.	2
18. The child's progress is directly affected when the regular classroom teacher also becomes involved in the child's problem.	2

	Frequency
19. Very important that every teacher teaching a child be willing to share in discussion and service regarding the child.	2
20. Teacher does not feel qualified to do this.	2
21. Has sufficient time for contact.	2
22. First year teacher in special ed - (very little done) gave consultation to teachers but hesitant to give inservices.	2
23. To do this, a teacher should have some background and training.	2
24. The University of Calgary should recognize the necessity for providing more special educator courses on both the undergraduate and graduate level. This would equip resource teachers to provide more leadership within the school.	1
25. As a small staff, we frequently discuss problems of students and try to be as much assistance to each other as possible.	1
26. The special class teacher should be an educational leader.	1
27. Would like once a month consulting time with teachers at least. Other teachers seldom use resource room materials.	1
28. Stress on individual attention.	1
29. Morale high because of exchange of ideas and flexibility of program.	1
30. Many special ed teachers often have the training and or experience to assist other and should be utilized this way.	1
31. Special ed teachers are willing to provide consultation; unfortunately classroom teachers are not willing to accept it.	1
32. Universities need to teach different strategies re: individualization.	1
33. Present consulting method is inadequate due to lack of time.	1
34. Teachers have undrealistic expectations.	1
35. Sufficient.	1
36. Would like to spend some time in regular class observing students.	1
37. Teachers tend to feel inservice should be done by people with professional expertise.	1
38. The onus is on the resource teacher.	1
39. Some teachers are not cooperative.	1
40. Has apprehension about taking time away from the children.	1

	Frequency
41. Leadership from the school level needed.	1
42. Flexibility, open-minded person needed.	1
43. Would like to give inservice to grade one teachers to cover problems re-occuring from year to year.	1
44. Teacher cooperation is excellent.	1
45. Where need exists, teachers are more inclinded to talk to counsellor.	1
46. Must let teachers know that special ed does not have all the answers.	1
47. Some regular class teachers don't understand that different levels of books should be used - need for ability grouping in the regular class instruction.	1
48. It would be good for the special ed teacher to know the expectations of his role, eg. possibility of in-service to other teachers.	1
49. Teachers are willing to discuss children in resource room but not so much with regular class children.	1
50. Would like to provide recommendations on specific problems.	1
51. Does not wish to involve other teachers in her area; reading adequate.	1
52. Have enjoyed providing assistance.	1
53. Would like to see a specific time during staff meetings for an explanation of the special teacher's role and special program.	1
54. The availability of the special teacher at short notice can make them more useful than a consultant for whom a long wait might be involved.	1
55. Teachers should not look at a student's I.Q. as much as other exact test results.	1
56. Invaluable.	1
57. It is very difficult to assist teachers unless they want assistance.	1
58. Very important for resource teacher to work closely with the regular class teacher and parents.	1
59. Regular teachers don't have time to provide for exceptional children.	1
60. There is little carry-over from resource room to regular class.	1

School-Based Administrators' Comments on Special Class Teachers' Role as a Consultant	Frequency
1. More time is needed in order for consultative services to be provided by the special education teacher.	21
2. Teachers are acting on their own time on a consultative basis on their own time.	18
3. Resource room very helpful - the program must be continued to help children with learning disability problems.	7
4. Need for additional funds for more resource rooms (more resource room teachers).	4
5. The special class teacher can be a very useful consultant particularly if she has had some practical experience.	4
6. The willingness of other teachers to receive this service is definitely improving.	3
7. The enthusiasm commitment and training of the teacher in this school's resource room have all contributed to a job well-done.	3
8. First year teachers find the role of consultant difficult. They must be eased into this rather than pushed.	2
9. Program new - less than a year.	2
10. Serves very useful purpose, teachers may not take advantage of it as much as they should.	2
11. It takes time and expertise on the part of the special class teacher to be accepted as a consultant.	2
12. To be regarded as a consultant the special class teacher must demonstrate that he has skill in diagnosing, building programs and evaluating. Until this happens, the special class teacher may be regarded as someone who puts in time with a few pupils who won't learn anything no matter what is done. He many be regarded as something of an oddity by the rest of the staff.	1
13. They do need to be highly trained and well aware of all materials available for their use. It is hard for someone not trained in this field to perform greatly and effectively as a consultant. Frequent workshops and inservice sessions are also necessary.	1
14. Her approach to discipline, outspoken manner, on belittling insinuations when talking about her students, had a tendency to cause other personnel in the school to have little confidence in what she was saying and a loss of respect and support for her. She has had opinion conflicts with other teachers regarding the value and worth of certain students.	1
15. Next year with a full-time teacher we will have to fill this role.	1

	Frequency
16. Essential to providing for the required teamwork necessary for resource room remedial instruction is consultation on the part of the special class teacher.	1
17. Part of the success of resource room operation depends on the ability of the special class teacher to act as a resource - consultant in terms of materials, programs and diagnostic assistance.	1
18. Classroom instructors seem to value such assistance from the special class teacher in that observation notes, materials and program ideas are being continually shared.	1
19. This is a good situation to have in a school.	1
20. She is a skilled teacher and communicator who is liked by all. The teachers respect her decisions and advice.	1
21. Very useful. Occasionally we try placing a student in a more or less challenging level, and our special teacher is the one we look to for follow-up evaluation.	1
22. Encouraging teacher to do more consultation.	1
23. Principal in favour, but time and staff number constraints reduce their change to provide consultation.	1
24. Consultation in this case (an inexperienced teacher) is often two-way, with each side, fortunately, willing to help each other.	1
25. The special class teacher must be a flexible person, one who is able to suggest programs and follow-up procedures to the classroom teacher without appearing to evaluate the teacher's in-class performance.	1
26. There is some need for the resource teacher not only to consult with the regular classroom teacher, but to observe the students, that he sees on an appointment basis, in the regular class.	1
27. She must be able to suggest materials and techniques that the classroom teacher can "work in" with her regular instruction groups.	1
28. Working very adequately.	1
29. We are attempting to integrate our special class students with the other students in the school. As a result, the special class teachers and the regular classroom teachers work very closely together. It would seem that consultation is a two-way street. Both groups (special class teachers and regular class teachers give and take).	1
30. If the special education teacher believes in integration, he can function well as a consultant.	1

	Frequency
31. Such a service on a larger scale would certainly be worthwhile and should be encouraged.	1
32. Would probably be desirable and not seen as a threat or an "expert" in the eyes of the teacher being assisted.	1
33. It would be nice if teachers were trained to be aware of the advice and consultative capacity of special ed teachers. Regular teachers need orientation to make use of the resource room for their program.	1
34. Professional development days are valuable - a chance for teachers to discuss common problems and share ideas.	1
35. Consultation is not set up on a formal basis.	1
36. Teacher will improve as she gains more experience and feels more adequate.	1
37. Suggestions for both regular classroom and resource room programs benefit from such a close working together of staff.	1
38. Classroom teachers tend to want their "problems" solved for them rather than taking an active role with the resource room teacher. I hope through administrative techniques and inservice to remedy this.	1
39. Special ed teacher voted very highly as a consultant at school level, divisional level and regional level.	1
40. In the past the teacher has been heavily loaded with students and therefore not invited to serve in this capacity. Next year should do more of it.	1
41. A good idea - a professionalizing experience - needs coordination which is the role of the principal.	1
42. Consultations with special class teachers are usually very productive.	1
43. Special class teachers are usually very knowledgeable about the availability of materials and their optimum use.	1
44. The special ed teacher is the expert in this area - should be able to show leadership.	1
45. Special class teacher must be a consultant to regular class teachers or the program is not as successful.	1
46. The special class teacher is in the best position to evaluate students as he works with them and is therefore able to determine the pupil's strengths and weaknesses. Her role as a consultant is very important.	1

	Frequency
47. The home room teachers attempt to support the work of the resource room in their regular class instruction of the pupils receiving special attention.	1
48. The special teacher must know the school and the kinds of problems in the school. (assessment)	1
49. In the past, it has been difficult to obtain the much needed help that is required for what may be termed the slow learner and culturally deprived students. The special class teacher would be of great help if allowed to work in cooperation with the regular staff, to keep the considerable number of students who are not learning disabled by definition, but who in fact do have problems as restricting as L.D. children.	1
50. The resource teacher and homeroom teacher work very closely together and do bring in subject area consultants and the guidance councellor when necessary.	1
51. There is a need for more programs but the government grants are too restrictive.	1

Central Office-Based Administrators'/Supervisors' Open-Ended Comments on Special Class Teachers' Role as a Consultant	Frequency
1. The resource room teacher would function more effectively if the principal and staff would receive more inservice in this regard. (The need for inservice to show special ed teachers what are the expectations and to increase their skills in consultation).	5
2. A very important role - should be structured rather than done informally.	3
3. Making good progress in this direction. Classroom teachers have not been used to this concept but are rapidly accepting it. We feel it is a useful dimension to the program. Also the resource teacher is providing very useful with parents.	3
4. Fully encourage and promote this role.	3
5. Does a great deal of informal unscheduled consulting.	2
6. One problem is that some teachers are not receptive to the resource room concept or have unreasonable expectations for resource room teachers.	1
7. Needs more support from other professional staff including administrators.	1
8. Regular teachers are more concerned about getting rid of their problems ie. handing them over to LD teachers.	1
9. Given the lack of paper qualifications, still push the consultative mode. Appears to be working in all except one school, - last resort, use team approach.	1
10. Not trained, therefore difficult; other teachers don't see them as expert. Therefore, loathe to accept them; has resulted here in joint evaluation of each child regularly.	1
11. I feel that the teachers would be most willing to serve as a resource to the other teachers in their schools.	1
12. A natural development as the program matures. Once a resource room is well established, expectation of the resource room teacher would certainly include consultation.	1
13. Found very few experienced regular teachers will transfer to special classes. Usually have to take young inexperienced teachers and train them.	1
14. Not too many special class teachers with both training and experience but this is gradually improving as teachers with training gain experience.	1
15. Expect to expand in this area within the next year.	1

	Frequency
16. A break-down of traditional resistance is slowly coming. Teachers are accepting the judgement of resource room teachers.	1
17. Like any other consulting service, it depends on the persons. Some special class teachers are very effective as consultants, others are not so effective but are very good in the classroom.	1
18. Following guidelines, 10% of special class teacher time is designated consulting time. Continuity of special program is contingent upon all school personnel supporting the program direction, generally, and the student's classroom changes, specifically. The consultation time is generally spent determining learning transfer and feasibility of the program in the regular classroom. Where the consultation in the school was absent or poorly dealt with, the program encountered real trouble; we believe this aspect of the special class teacher's duties to be of high priority.	1
19. Special class teacher invariably is better trained and with experience is a logical resource person to elementary teachers. The special education class is not an appendage to the system, but rather the hub or centre of it. Our experience is that this is the reality of the school after a few years.	1
20. This concept has been rather slow in receiving acceptance. Regular classroom teachers are realizing the value of information they can receive from resource room teachers. Once there is this type of acceptance, great benefits can be derived. On the other hand, a resource room teacher who feels competent to offer such consultative services is essential. It must be a team effort, with mutual respect for the roles of each type of teacher.	1
21. Special class teachers, central supervisor and room teachers work as a team to devise programs for each child at his instructional levels. The program is carried on in the classroom supplemented and directed by the Special class teacher and supervised by the supervisor of instruction from central office.	1
22. The special class teacher, because of accumulated skills, has the knowledge to be of assistance to his or her fellow staff members. If the special class teacher is aware of the needs of fellow teachers she would then be in a position to offer aid. This, however should be initiated by the school administrator.	1
23. Some grade 1 and 2 teachers don't make referral because they feel it is a reflection of their adequacy.	1
24. The reticence of this teacher tends to inhibit her. On the other hand, she has much to offer to her fellow teachers.	1

	Frequency
25. Special ed teachers are a source of instructional techniques diagnostic information, material sources etc. to other teachers. I have a strong feeling that some of the resource teachers are not willing to provide consultation. Materials in the new school not particularly plentiful. Superintendent would like to expand program to junior high.	1
26. Feels that University program does not teach special ed teachers to work well enough with learning disabled students - would like all teachers to have some idea of interpreting test results.	1
27. Varies considerably, probably will take considerable time to establish the special teacher in this role. It is not one that we have stressed.	1
28. Must recognize need for consulting process, many lack understanding of consulting.	1
29. This is a vital role of the special class teachers. It takes time to coordinate these services and I feel there should be support for same.	1
30. Our special education class has not been in operation very long. Teachers are expressing a lot of satisfaction with regard to the special class. They are also expressing the need to consult with the special ed teacher and vise-versa. Our present special ed teacher is not a specialist in that field. We have relied very much on the services of specialists from the LAC and have developed a very good service for students with disabilities. This teacher as I see it can share with others what he has learnt and is doing in order to correct student learning problems. Other teachers can reinforce what he does through follow-up if possible in other related subjects.	1
31. This is an important function of LD teachers in that it allows them to maintain programs for their students in regular classrooms, and it permits LD teachers to give advice to teachers of students with mild problems who are not included in the actual LD class.	1
32. Our resource teachers are consultants and I feel they are educating classroom teachers. It is a slow process, but I believe it is more effective then imposing from the outside. These teachers work on the "peer" level and the changes they bring about are implemented on a daily basis rather than receiving lip service when consultants are in the school building.	1
33. Not done much in this direction.	1
34. During this first year a minimal amount of formal consultation was provided by special education teachers to the classroom	1

	Frequency
teacher. This was due largely to a lack of opportunity for such consultation to take place - a factor which is to be given study for the next year. Personalities play a major role in determing the effectiveness of such consultation.	1
35. "Key" to success of special class teacher as consultant is the relationship the teacher has established with the other teacher in the school. Teachers who feel the special class teacher is providing help to them; the program is probably operating successfully.	1
36. Segregated class teacher has less opportunity to act as consultant to other teachers and less need than where the child is shared.	1
37. Special class teachers may become more intimately aware of the problems facing the young people in trouble and should submit these findings to the other teachers associated with these individuals. We appreciate the increase in the number of visits per year from Department of Education Special Education Consultants.	1
38. The expertise of the special class teacher will affect this role as will also her years of experience in such a position. As a result, with new people in this area, consultation becomes a sharing of information rather than provision of specific ideas by the special class teacher. This is not altogether bad as it provides an avenue for growth into the consulting role. With training and development, I think the special ed teacher can provide an essential service in this area.	1
39. Resource room teacher's role is a very significant one in probiding support services to the classroom teacher. She must establish reliability in the eyes of the classroom teacher. A spin-off would be greater awareness of learning disabilities by the regular teacher.	1
40. A very difficult aspect of the program to encourage. Depends greatly on the personality of the teacher and the tone of the school (largely determined by principal). If the teachers in a school have a very "traditional" outlook they may regard their class as their exclusive domain and resent any consultation or suggestions (applies to one of two schools) - may even resent special ed position existing. Very oriented to one teacher - one class and think special ed to blame for higher pupil/teacher ratio.	1

APPENDIX K

OVERALL ADEQUACY OF SPECIALIST SUPPORT SERVICES AS PERCEIVED BY SPECIAL EDUCATION TEACHERS AND THEIR ADMINISTRATORS

Table 109

Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparison of Mean Ratings According to Position Occupied by Respondents

Support Personnel		Positions Occupied by Teacher					
		Itinerant Teacher	Half-Time Resource	Full Time Teacher	Total Resource Teachers	Segregated Special Class	Learning Assistance Centre
Psychologists	N	5	29	59	88	13	7
	$\bar{x}$	3.23	3.20	3.21	3.21	2.71	2.39
	SD	1.34	1.23	1.21	1.21	1.35	1.05
Psychiatrists	N	3	9	15	24	8	5
	$\bar{x}$	1.75	2.39	1.60	1.90	1.91	1.35
	SD	1.09	1.73	1.06	1.37	1.32	.78
Social Workers	N	4	14	30	44	11	7
	$\bar{x}$	2.94	2.61	2.54	2.56	2.43	1.89
	SD	1.23	1.62	1.40	1.46	1.21	.84
Speech Therapists	N	5	21	44	65	9	7
	$\bar{x}$	2.80	3.25	2.96	3.05	2.11	2.36
	SD	1.64	1.64	1.47	1.52	1.17	1.52
Health Workers	N	6	30	62	92	13	8
	$\bar{x}$	3.64	3.34	3.59	3.51	3.32	2.31
	SD	.89	1.02	1.04	1.04	1.08	1.00
School System Personnel	N	6	33	70	103	16	8
	$\bar{x}$	3.86	3.99	3.71	3.80	3.34	3.10
	SD	.70	.60	1.07	.95	1.06	1.01

*Means are based on the following scale and reflect the perceptions of those who have utilized the service (N)

Seldom or never useful	-1
Sometimes useful	-2
Useful about half the time	-3
Often useful	-4
Very often useful	-5

Table 110

Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparison of Mean Ratings According to Source of Support for Diagnostic Service

		Source of Support for Diagnosis			
		School System	Contract	Contract and School System	LAC or LAFS and School System
Psychologists	N	80	10	11	11
	$\bar{x}$	3.16	3.34	3.00	2.59
	SD	1.25	1.22	1.12	1.24
Psychiatrists	N	31	3	5	1
	$\bar{x}$	1.86	2.67	1.40	1.00
	SD	1.31	1.53	.55	.00
Social Workers	N	47	5	5	8
	$\bar{x}$	1.35	2.00	1.90	2.72
	SD	2.55	1.73	1.23	1.18
Speech Therapists	N	67	6	7	6
	$\bar{x}$	2.78	4.17	2.25	3.50
	SD	1.52	.41	1.24	1.64
Health Workers	N	85	9	10	14
	$\bar{x}$	3.39	3.15	2.82	3.98
	SD	1.09	1.10	1.08	.79
School System Personnel	N	94	8	11	19
	$\bar{x}$	3.67	3.67	3.70	3.75
	SD	.95	.96	.83	1.27

*Means are based on the following scale and reflect the perceptions of those who have utilized the service (N)

Seldom or never useful	-1
Sometimes useful	-2
Useful about half the time	-3
Often useful	-4
Very often useful	-5

Table 111

Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparison of Mean Ratings According to Teacher Education in Special Education

Support Personnel		Teacher Education in Special Education and Related Courses: Number of Courses			
		More than Five	Four or Five	Two or Three	None or One
Psychologists	N	50	15	23	26
	$\bar{x}$	3.14	2.87	2.94	3.32
	SD	1.25	1.18	1.12	1.33
Psychiatrists	N	16	6	11	8
	$\bar{x}$	1.92	1.83	1.89	1.50
	SD	1.38	1.60	1.05	1.07
Social Workers	N	31	11	11	14
	$\bar{x}$	2.75	2.02	1.98	2.71
	SD	1.38	1.03	1.33	1.37
Speech Therapists	N	36	15	24	12
	$\bar{x}$	3.08	2.90	2.78	2.38
	SD	1.53	1.61	1.42	1.46
Health Workers	N	48	19	28	25
	$\bar{x}$	3.49	3.53	3.18	3.37
	SD	1.05	1.05	1.06	1.16
School System Personnel	N	52	23	28	31
	$\bar{x}$	3.65	3.59	3.59	3.95
	SD	.90	1.05	.85	1.15

*Means are based on the following scale and reflect the perceptions of those who have utilized the service (N)

Seldom or never useful	-1
Sometimes useful	-2
Useful about half the time	-3
Often useful	-4
Very often useful	-5

Table 112

Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparisons of Mean Ratings* According to Years of Total Teaching Experience

Support Personnel		Total Teaching Experience		
		Five or More Years	Two to Four Years	Nil or One Year
Psychologists	N	74	26	14
	$\bar{x}$	3.30	2.72	2.79
	SD	1.21	1.22	1.19
Psychiatrists	N	30	8	3
	$\bar{x}$	1.93	1.69	1.00
	SD	1.25	1.39	.00
Social Workers	N	39	17	11
	$\bar{x}$	2.26	2.77	2.91
	SD	1.30	1.33	1.43
Speech Therapists	N	61	16	10
	$\bar{x}$	2.80	3.06	3.00
	SD	1.50	1.37	1.75
Health Workers	N	80	25	15
	$\bar{x}$	3.35	3.45	3.59
	SD	1.05	.94	1.41
School System Personnel	N	88	32	14
	$\bar{x}$	3.72	3.58	3.79
	SD	1.03	.85	.99

*Means are based on the following scale and reflect the perceptions of those who have utilized the service (N)

Seldom or never useful	-1
Sometimes useful	-2
Useful about half the time	-3
Often useful	-4
Very often useful	-5

Table 113

Adequacy of Support Services Personnel as Perceived by Special Class Teachers: Comparison of Mean Ratings According to Years of Experience in Special Education

Support Personnel		Experience Teaching Special Education			
		Five or More Years	Two to Four Years	One Year	Nil Years
Psychologists	N	24	36	30	24
	$\bar{x}$	3.40	3.23	2.91	2.86
	SD	.95	1.22	1.35	1.32
Psychiatrists	N	11	14	8	8
	$\bar{x}$	2.52	1.70	1.25	1.63
	SD	1.38	1.32	.46	1.19
Social Workers	N	15	25	14	13
	$\bar{x}$	2.42	2.58	2.02	2.94
	SD	1.19	1.41	1.06	1.58
Speech Therapists	N	21	31	20	15
	$\bar{x}$	3.06	2.82	2.83	2.77
	SD	1.42	1.56	1.44	1.68
Health Workers	N	26	39	27	28
	$\bar{x}$	3.42	3.23	3.27	3.74
	SD	.97	.94	1.20	1.17
School System Personnel	N	28	31	29	32
	$\bar{x}$	3.60	2.82	3.84	3.61
	SD	.96	1.56	.91	1.01

*Means are based on the following scale and reflect the perceptions of those who have utilized the service (N)

Seldom or never useful	-1
Sometimes useful	-2
Useful about half the time	-3
Often useful	-4
Very often useful	-5

Table 114

Adequacy of Support Services Personnel as Perceived by Administrators:

Comparison of Mean Ratings According to Zone Clusters

Support Personnel		Regions					
		LAC (Zone 1)	Rural & Small Urban	Large Urban	LAC & LAFS	LAFS	Total
Psychologists	N	16	128	41	24	11	169
	$\bar{x}$	2.94	3.10	3.12	2.50	2.33	3.11
	SD	1.20	1.18	.89	1.07	1.04	1.11
Psychiatrists	N	11	76	31	18	9	107
	$\bar{x}$	2.55	2.35	2.54	2.54	2.53	2.40
	SD	1.51	1.32	1.22	1.42	1.42	1.29
Social Workers	N	15	109	35	26	13	144
	$\bar{x}$	2.78	2.43	2.80	2.57	2.39	2.52
	SD	1.04	1.09	1.03	1.14	1.25	1.09
Speech Therapists	N	8	100	37	14	9	137
	$\bar{x}$	3.04	2.99	3.35	2.76	2.82	3.09
	SD	1.39	1.41	1.09	1.42	1.55	1.33
Health Workers	N	17	132	37	28	14	169
	$\bar{x}$	3.65	3.28	3.41	3.63	3.48	3.31
	SD	.93	1.08	1.13	.89	1.05	1.09
School System Personnel	N	19	138	41	30	14	179
	$\bar{x}$	3.68	3.44	3.82	3.50	3.34	3.53
	SD	.57	.92	.70	.80	1.01	.89

Note: $\bar{x}$=mean
N=those who chose to answer whether or not they used the service

Scale:
Seldom or Sometimes Useful -1
Sometimes Useful -2
Useful about Half the Time -3
Often Useful -4
Very Often Useful -5

Table 115

Adequacy of Support Services Personnel as Perceived by Administrators: Comparison of Mean Ratings According to Location and Source of Diagnosis

Support Personnel		Location		Source of Diagnosis			
		School-based	Central Office based	School system	Contract	Contract & School System	LAC or LAFS & School System
Psychologists	N	109	60	99	10	35	30
	$\bar{x}$	2.99	3.32	3.17	2.98	3.53	2.41
	SD	1.17	.98	1.12	1.17	.91	1.02
Psychiatrists	N	68	39	61	6	18	23
	$\bar{x}$	2.21	2.74	2.28	1.83	2.81	2.46
	SD	1.24	1.32	1.25	1.11	1.32	1.33
Social Workers	N	92	52	81	8	26	32
	$\bar{x}$	2.46	2.64	2.58	1.97	2.38	2.45
	SD	1.12	1.03	1.14	.81	.96	1.09
Speech Therapists	N	86	51	87	7	27	19
	$\bar{x}$	2.82	3.54	3.12	2.29	3.43	2.68
	SD	1.29	1.29	1.35	.83	1.25	1.31
Health Workers	N	109	60	96	11	34	34
	$\bar{x}$	3.26	3.40	3.25	2.70	3.36	3.44
	SD	1.17	.93	1.09	1.07	1.12	1.02
School System Personnel	N	117	62	102	11	36	36
	$\bar{x}$	3.48	3.63	3.61	2.96	3.55	3.31
	SD	.89	.89	.90	1.07	.89	.88

$\bar{x}$ =mean
N= those who chose to answer whether or not they used the service
Scale:

Seldom or Sometimes Useful	-1
Sometimes Useful	-2
Useful about Half the Time	-3
Often Useful	-4
Very Often Useful	-5

APPENDIX L

MATERIALS AND EQUIPMENT FOUND USEFUL BY SPECIAL CLASS TEACHERS

Special Class Teachers' Perceptions of Materials and Equipment

In Order of Most Useful		Frequency
CASSETTES & TAPE RECORDERS		50
LANGUAGE MASTER PROGRAM	Bell & Howell	47
SPECIFIC SKILL SERIES	Barnell, Loft	46
SCHOOLHOUSE S.R.A.	S.R.A.	23
LANGUAGE PATTERNS	Bell & Howell	18
READERS DIGEST		17
STOTT PROGRAMMED READING & MATH	Gage	15
FLASH X	Philograph Publishing	15
OVERHEAD PROJECTOR		14
WEBSTER WHEELS	McGraw-Hill	14
PRIMARY PHONICS	Ed. Pub. Services	14
LISTENING CENTRE		13
INDIVIDUAL READING PROGRAM	S.R.A.	13
DISTAR READING	S.R.A.	11
PEABODY LANGUAGE	American	11
PHONICS WE USE	Rand McNally	11
PALO ALTO READING SERIES	Harcourt Brace	10
SCHOOLHOUSE (A WORD ATTACK SKILLS KIT)	S.R.A.	9
NEW PRACTICE READERS	McGraw-Hill	9
OPEN HIGHWAYS	Gage	9
D.L.M. KITS	D.L.M.	9
DOLCH READING & WORD & PHRASE LIST		9
PAL PAPERBACKS (High Interest - Low Vocabulary)	Ginn	9
BASIC READING SKILLS	S.R.A.	8
BOMOR READING SERIES (A Monster Book)	Bomar	8
PHONETIC READERS	Ed. Pub. Services	8
I CAN READ LIBRARY	Fitzhenry	8
MERRILL LINGUISTICS READING & LANGUAGE	Bell & Howell	8
SOUND WAY TO EASY READING	Brenner Davis Phonics	8
SFA-BRS SATELLITE KIT	S.R.A.	8
SULLIVAN SERIES	McGraw-Hill	7
DURRELL-MURPHY PHONICS PRACTICE	Harcourt & Brace	7
CONQUESTS IN READING	McGraw-Hill	7
RECORD PLAYER		6
CHECK & DOUBLE CHECK - MATH	Scholar's Choice	6
VERI TECH	Brault	6
FROSTIG MATERIALS	Follett Publishing Co.	6
SPEECH-TO-PRINT PHONICS	Durrell-Murphy	6
SRA COMPUTAPES MOD 7-8-9	S.R.A.	5
SCHOLASTIC PUB.	S.R.A.	5
BASIC GOALS IN SPELLING	Koztmeyer	5
READING LAB 1B-2C	S.R.A.	5
PHONIC RUMMY	Kenworthy	5
PERCEPTUAL COMMUNICATION SKILLS	Assoc. Visual Services Ltd.	5
PHOENIX READING SERIES	Preston-Hill	5
DUSO KIT D-Z	American Guidance Service	5

		Frequency
CORRECTIVE READING PROGRAM	S.R.A.	5
CRACKING THE CODE	S.R.A.	4
CONTROLLED READER		4
DOLCH GAMES		4
DEVELOPING COMP. IN READING	Thomas & Ramsay	4
DR. SPELLO	McGraw-Hill	4
DIGITOR	Dent	4
PROGRAMMED READING ACTIVITIES	McGraw-Hill	4
PROGRAMMED READING KIT	Cage	4
REMEDIAL READING DRILLS	G. Wahr Publishing	4
HEGGE KIRK AND KIRK DRILLS	G. Wahr Publishing	4
INDIVIDUAL MATH	Patric Soppes & M. Jerman	4
LOOK, LISTEN & LEARN		4
GINN WORD ENRICHMENT	Ginn	4
GINN WORKBOOKS	E.O.F.	4
SRA RED SCHOOLHOUSE	S.R.A.	4
SYLLABICATION SKILLS	Kenworthy Ed. Services	3
SOUND FOUNDATIONS PROGRAM	Developmental Learning	3
SPEEDIESCOPE	S.V.E.	3
STRUCTURAL READING	Random House	3
SRA INDIVIDUALIZED READING SKILLS	S.R.A.	3
SPRINT LIBRARY	Scholastic Book Service	3
SUPPORTIVE READING SKILLS	Dexter & Westbrook	3
FRY WORD LIST	McGraw-Hill	3
GINN 360 LEVEL SIGHT WORDS		3
TYPEWRITERS		3
WORKING WITH LETTERS	Holt, Rinehart & Winston	3
MIAMI LINGUISTICS	Heath	3
I.S. MATH	Addison-Wesley	3
KNOW YOUR WORLD	Edumedia	3
LADYBIRD WELL LOVED SERIES	Ladybird Books	3
LETTER CLUSTERS	LAPS	3
BOWMAN PRIMARY READING SERIES	Bowman	3
BE A BETTER READER	Prentice - Hall	3
BASAL READERS	Ginn	3
PATTERN CARDS & BEADS		3
CYCLOTEACHER	World Book	3
CONTROLLED READER		3
DIAGNOSITC READING KIT	Merrill	3

		Frequency
CLUES TO READING		2
CALCULATORS		2
COWBOY SAM SERIES	Benefic Press	2
CUISINAIRE RODS		2
PHONICS WORK BOOK	Prentice - Hall	2
POPPER WORDS (ETC.)	Garrard Publishing	2
PROGRAMMED PHONICS		2
REFRESHER MATHEMATICS	Allan & Bacon	2
READING SKILL CARDS	Stone - Gowen	2
READING CARAVAN		2
ANIMAL ADVENTURES	Scholar's Choice	2
APT - AUDITORY DISCRIMINATION SERIES	Developmental Learning Materials	2
NELSON'S COURSE IN PHONIC READING	Ed. Pub. Services	2
I READ AND I UNDERSTAND	S.R.A.	2
LANGUAGE ACTIVITY CARDS	Ginn	2
LISQUISTIC READERS	Harper & Row	2
LANGUAGE IN ACTION	MacMillan	2
MATHLAB	Jack Hood School Supplies	2
MICHIGAN TRACKING	Ann Arbor	2
MATH ACTIVITY	D.H. Scott	2
NELSON ADVENTURE BOOKS	Nelson	2
TUTOR'S SAMPLER		2
TALKING STORY BOOKS I & II		2
TRY KIT		2
THIRTY LESSONS IN OUTLINING		2
UNDERSTANDING QUESTION & WORD GROUPS		2
VOCABULARY BOOKS	MacMillan	2
WORLD OF ADVENTURE SERIES	Benefic Press	2
WORDS TO USE	Gage	2
ELEMENTARY SCHOOL MATH	Addison-Wesley	2
EAR PHONES	E.D.F.	2
FLANNEL BOARD		2
GETTING THE MAIN IDEA	Barnell, Loft	2
SUPER STOCK RACE GAME	Allied Ed.	2
SCHOOLHOUSE (COMPREHENSIVE PATTERNS)	S.R.A.	2
SCOPE-READING SKILLS	Scholastic	2
SRA MATH	S.R.A.	2
SEQUENTIAL PICTURE CARDS	D.L.M.	2
SELMA HERR PHRASE LIST	Dolch	2
SCHONELL SPELLING		2
SRA SPELLING LAB	S.R.A.	2
SCOTT-FORESMAN READING SYSTEM	Scott, Foresman, & Co.	2
STANFORD DIAGNOSTIC ARITHMETIC TEST	Harcourt & Brace	2

		Frequency
SEA OF VOCABULARY		1
SPACE FLIGHT		1
SENTENCE CAKE GAME		1
SRA VOCABULAB #3	S.R.A.	1
SRA YELLOW SCHOOL HOUSE	S.R.A.	1
STUDY CARDS	Scott, Foresman, & Co.	1
SRA LEARNING TO THINK	S.R.A.	1
SINGER MOTIVATION ACTIVITIES - MATH		1
STANWIX READING SKILLS		1
SKILLCARTER LEARNING KIT	Random House	1
SKILL PACERS	Random House	1
SUPER BOOK SERIES	Lippencott	1
STERN SERIES	Random House	1
STONE NEW READERS	McGraw-Hill	1
SOUND OF WORDS	Bremner - Davis	1
SOAR	Alta. Coutt	1
SOLVING LANGUAGE DIFFICULTIES	Educator's Pub. Service	1
SEEING THROUGH ARITHMETIC	Gage	1
SCOPE MAGAZINE		1
EDL PACER		1
ECRI READING & LANGUAGE HANDOUTS	ECRI Reading Centre	1
EYE & EAR FUN	McGraw-Hill	1
EB PRESS CORRECTIVE READING PROGRAM	S.R.A.	1
ESSENTIALS OF MATH	Ginn	1
E.P.S.B. MATH PROGRAM		1
ENGLISH PICTURE READERS		1
FRACTION KIT	S.R.A.	1
FIT-A-NUMBER	Larri	1
FUN WITH WORDS		1
FINE MOTOR SKILLS		1
FITZLEIGHT PLUS PROGRAM		1
FLYING START		1
FLESCH READING METHOD		1
FOCUS ON SELF-DEVELOPMENT		1
GETTING IT TOGETHER		1
GAMES		
GRAUTHERN READING SKILLS	Kent	1
GUIDEBOOK TO BASIC ENGLISH	Edumedia	1
GINN READING SERIES	Ginn	1
GROWTH OF A NATION SERIES	Fitshenry & Whiteside	1
GROUP WORD TEACHERS GAME		1
GRIFAN PIRATE SERIES		1
SCHOLASTIC BOOKS		1
SIX-TEN WORKSHOP		1
SPECTRUM MATH SERIES		1
TV		1
TRACING LETTERS		1
THE WINNING TOUCH	Ideal	1
TABLE PROGRESS GAME	Philograph Pub. Inc.	1

		Frequency
TACTIA A & B	Gage	1
TREASURE CHART	Kenworthy	1
THE LANGUAGE PROJECT	MacMillan	1
TACHISTOSCOPE		1
THE INCREDIBLE SERIES		1
TARGET READING		1
TROUBLE SHOOTING		1
THINK LAB		1
VISUAL MEMORY CARDS	D.L.M.	1
VERITECH	L. Kool & Son	1
VOWEL PICTURES	Ideal	1
WORDLY WISE		1
WORD FAMILY FUND		1
WORD ATTACK SKILL KIT	S.R.A.	1
WOODCOCK READING MASTER TEST	A.G.A.	1
WE DISCOVER READING	Random House	1
WORD ANALYSIS PRACTICE	Harcourt, Brace	1
WINNERS CIRCLE		1
WOODEN SCREENS		1
WEBSTER EVERYREADERS		1
LANGUAGE COME ALIVE	Dent	1
LEARNING TO THINK		1
MATH DUPLICATING SHEETS	Love Publishing	1
MISC. & MATH GAMES		1
MOVING UP IN NUMBERS	P.L.M.	1
MIX & MATCH PUZZLES	Scholar's Choice	1
MacMILLAN SPELLERS	MacMillan & Co.	1
MATH IMAGINATION	Western Ed. Activities	1
MULTIFACTOR BOARD		1
MILLIKAN DUPLICATING BOOKS	McBain Camera	1
MacDONALD STARTERS	MacDonald & Co.	1
MATH FACT KIT		1
MacMILLAN SPECTRUM OF SKILLS		1
MY WEEKLY READER		1
MATH MAGILS		1
MINI-MYSTERIES		1
NEW GRADED WORD PHRASES	S.V.E.	1
NEWSPAPERS		1
NOVELTY GRAMMERS		1
NEW CORRECTIVE READINGS	S.R.A.	1
OMNI TUTOR		1
OPERATOR'S MANUAL	Queen's Printer	1
OPEN COURT		1
ONE TOO MANY		1
HEADS UP	G. Wahr Publishing	1
HANDY BOOK OF HANDY WORDS	J. Hennig	1
HOUSE OF CHALLENGE	Benefic Press	1
HOLT'S IMPACT READERS & RECORDS		1
HAYE'S LANGUAGE		1

		Frequency
HAYE'S MATH		1
HEATH MATH		1
IDEAL CARD GAMES	Ideal	1
INSTRUCTIONAL COMMUNICATION SKILLS		1
INVESTIGATING SCHOOL	Addison-Wesley	1
INSTANT PHONICS		1
INSTRUCTIONAL AID KITS		1
JIM FOREST READING SERIES	Gage	1
JUST ENGLISH		1
KEY MATH	A.G.S.	1
KIRK AND AHIGH DRILLS		1
KENNORTHY MEETS (FLASH CARDS)	Moyer's	1
KEER PERCEPT PROGRAM		1
KING SERIES		1
LIPPINCOTT SERIES		1
LS: READING TECHNIQUES	Learning Systems Inc.	1
LIP-READING MINOR	Edison	1
LANGUAGE EXERCISES		1
ACTION & DOUBLE ACTION		1
ACTION LIBRARY		1
ACT MANUAL	Canadian Educational & Phych. Can. Ltd.	1
ARITHMETIC SKILLS CARDS	Addison - Wesley	1
AUDITORY DISC.	D.L.M.	1
APPLYING MATHEMATICS		1
AFTER MATH		1
AUDITORY PERCEPTION TRAINING		1
ADDING NUMBERS		1
BISUAL MEMORY CARDS	D.L.M.	1
BASIC SIGHT WORDS & PHRASES	Garrard	1
BASIC MATHEMATICS MODULES	C.F. Merrill	1
BLOCK DESIGNS & MATERIALS	Ideal	1
BREAK THROUGH	MacMillan	1
BREMNER-DAVIS PHONICS	B.D. Phonics Inc.	1
BLENDOGRAMS GAME		1
BUILDING READING SKILLS		1
PEGMATCH GROUPING KIT	D.L.M.	1
PATTERNS OF ENGLISH	Stott	1
PROJECTION READERS	Cenco Ed. Aids	1
PROGRAMMED MATH	Sullivan	1
PHONIC MATH	Bell & Howell	1
PROGRESSIVE ARTICULATION		1
PILOT LIBRARY		1
READING ACCELORATOR		1
READ & HEAR RESEARCH	Golden Press	1
RAINBOW DICTIONARY	World Publishing	1
READ MASTER	K.A. Vison	1
READ ON!	Ed. Insights Inc.	1
READ & WRITE	Scott, Foresman, & Co.	1

		Frequency
READING COMPREHENSION	MacMillan & Co.	1
RESUCE READING	Ginn	1
READING BOOSTER	McGraw-Hill	1
REBUS READING		1
READING FOR UNDERSTANDING		1
READ, STUDY & THINK		1
LETTER CLUSTERS		1
CONTINUOUS PROGRESS IN SPELLING	Red Deer Regional Office	1
CHECKERED FLAG SERIES	The Economy Co.	1
CLASSIFICATION & ORDER		1
COPP-CLARKE SERIES	Prentiss-Hall	1
COMPREHENSION TASK CARDS	C.C. & Co.	1
DOGHOUSE GAME		1
DIRECTIONAL-SPATIAL PATTERN BOARD		1
DURRELL WORD ANALYSIS PRACTICE CARDS	Dubnoff	1
DENTS READING FOR COMPREHENSION		1
DISCRIMINATION ACTIVITIES	Dent	1
DEVELOPMENTAL READING MATERIALS	Continental Press	1
DR. SEUSS		1
DUPLICATED WORK SHEETS	Random House	1
DICTO-CABULARY	Continental Press	1
		1

In Order of Least Effective		Frequency
ALTA. SOCIAL STUDIES	Dept. of Education	1
AUDITORY PERCEPTION KIT	D.L.M.	1
BREAK THROUGH	Allan & Bacon	1
BASAL READERS		1
CHOOSE & CHECK	Scott, Foresman, & Co.	1
CONQUESTS IN READING	McGraw-Hill	1
CHECK & DOUBLE CHECK PHONICS & MATH	Scholar's Choice	1
COMMERCIAL PROGRAMS	(kids have to adapt to program)	
CONTEMPORARY MATH	Hanwell, MacPherson	1
CHECKERED FLAG SERIES	Addison-Wesley	1
DOLCH SERIES	Garrard Publishing	1
DURRELL SULLIVAN READING TEST		1
DLM JOB PUZZLES	D.L.M.	1
DR. SPELLO	McGraw-Hill	1
DETECTING SEQUENCE	Barnell, Loft	1
EYE & EAR FUN	McGraw-Hill	1
EDL READING PROGRAMS	(too high content)	1
FOLLOWING DIRECTIONS	Barnell, Loft	1
GATES McGILLOP		1
HEINEVETTERS ZEHNERTRAINER		1
HEGGE KIRK DRILLS		1
INDIVIDUAL READING	S.R.A.	1
INSTRUCTO ACTIVITY KIT	Instructo	1
JUST ENGLISH		1
JAN & CAP CAN. NAP	Merrill	1
JENN WORKBOOKS	Jenn Publications	1
LOOK, LISTEN & LEARN	Millikin Publishing	1
LEARNING TO READ WHILE READING TO LEARN SERIES		1
LANGUAGE MASTER	Bell & Howell	1
MY FACE AND BODY	Instructo	1
MATH BOOKS	Scholar's Choice	1
MICHIGAN TRACKING	(pens run dry)	1
MACDONALD STARTERS		1
NEW DIMENSION MATH SERIES		1
OPEN HIGHWAYS	Gage	1
PASSPORT TO READING	MacMillan & Co.	1
PATTERNS OF ENGLISH	Stott	1
PINE MOUNTAIN ADVENTURE SERIES		1
PROGRAMMED READING	Sullivan	1
PROGRAMMED APPROACH TO WRITING	Ginn & Co.	1
PATTERN FOR READING	Scholastic	1
PAL PAPERBACKS (High Interest-Low Vocabulary)	(few available pupils haven't read)	1
PALO ALTO READING PROGRAM	Harcourt Brace	1
PRIMARY CUT-OUTS		1
READING COMPREHENSION IN VARIED SUBJECT MATTER	Educators Pub. Service	1

		Frequency
READMASTER	Ken-A-Vision	1
READING ACCELERATION	S.R.A.	1
REGULAR ELEMENTARY	Thold	1
READING WORKBOOKS	Nelson	1
SRA RED SCHOOLHOUSE	S.R.A.	1
SIGHT-FIRST READERS		1
SRA SCHOOLHOUSE (A WORD ATTACK SKILL).	S.R.A.	1
SELMA HERR PHRASE LISTS		1
STUDY SCOPE	Benefic Press	1
SPELLING GAMES - LEARNING KIT	Lyons & Carnahan	1
SUCCEED IN SPELLING	Eston Walch	1
SPECTRUM OF SKILLS (WORD ANALYSIS)	MacMillan & Co.	1
SPECIFIC SKILLS	Barnell, Loft	1
SPEED-I-O-SCOPE	Bell & Howell	1
SRA READING KIT	S.R.A.	1
SORT A CARD		1
TRAINING AUDITORY MEMORY KIT		1
VOICE MIRROR		1
WORKING WITH LETTERS	Holt, Rinehart	1
WEBSTER WORD WHEELS	McGraw-Hill	1
WORKING WITH SOUNDS	Barnell, Loft	1
WORD GAMES	S.R.A.	1
WORDS READING SCHEME	Books Ltd.	1
WHIRLIGIG	Lectra Leura Inc.	1
YOUR OWN THING READING SERIES		1
DEVELOPING COMPREHENSION IN READING	Dent	2
DUBNOFF PERCEPT-MOTOR PROGRAM	Dubnoff	2
FLASH X	Educ. Ed. Laboratories	2
FROSTIG		2
MACMILLAN READING SPECTRUM	MacMillan & Co.	2
PHONICS WE USE	Rand, McNally & Co.	2
PEABODY LANGUAGE DEVELOPMENT KIT	(too structural)	2
READING FOR CONCEPTS	McGraw-Hill	2
SRA SCHOOLHOUSE	S.R.A.	2
SVE EDUCATIONAL FLIMSTRIPS	Singer	2
THINKLAB	S.R.A.	2
PATTERNS FOR WRITING (good for EMR pupils not LD)		3
BE A BETTER READER	Prentice - Hall	3
LADYBIRD SERIES	Ladybirds	3
DOLCH SERIES	Garrard Publishing	4
MERRILL LINGUISTIC READERS	Merrill Pub. Co.	4
READERS DIGEST - READING SKILL BUILDER		4
DISTAR	S.R.A.	5

APPENDIX M

ADEQUACY OF PRESENT ARRANGEMENTS FOR TRANSFER OF PUPILS IN OR OUT OF SPECIAL CLASSES

TABLE 116

ADEQUACY OF PRESENT ARRANGEMENTS FOR TRANSFERRING PUPILS IN AND OUT OF SPECIAL CLASS: COMPARISONS OF RATINGS BY SPECIAL CLASS TEACHERS ACCORDING TO TEACHING POSITION

Teacher Group Reporting	Transfers In or Out	Summary Statistics	
		$\bar{x}$	SD
All Teachers (N=138)	Transfer In	4.1	0.8º
	Transfer Out	4.2	0.81
Itinerant Resource Teachers (N=6)	Transfer In	4.7	0.52
	Transfer Out	4.7	0.52
Half-Time (or less) Resource Teachers (N=34)	Transfer In	4.1	4.85
	Transfer	4.1	0.79
Resource Teachers More than Half-Time (N=73)	Transfer In	4.0	0.87
	Transfer Out	4.2	0.78
Teachers of Segregated Special Class (N=16)	Transfer In	3.9	0.93
	Transfer Out	4.2	0.80
Learning Assistance Centre Teacher (N=8)	Transfer In	4.0	1.31
	Transfer Out	3.8	1.28

Note: The means or averages ($\bar{x}$'s) on the 5-point adequacy scale may be interpreted as follows: 1 - Totally inadequate, 2 - Inadequate, 3 - Somewhat adequate, 4 - Adequate, 5 - Very adequate.

TABLE 117

ADEQUACY OF PRESENT ARRANGEMENTS FOR TRANSFERRING PUPILS IN AND OUT OF SPECIAL CLASS: COMPARISONS OF RATINGS BY SPECIAL CLASS TEACHERS ACCORDING TO TRAINING LEVEL OF TEACHERS IN SPECIAL EDUCATION

Teacher Group Reporting	Transfer In or Out	Summary Statistics	
		$\bar{x}$	SD
All Teachers (N=138)	Transfer In	4.1	0.89
	Transfer Out	4.2	0.81
More than five University Courses (N=53)	Transfer In	4.1	0.86
	Transfer Out	4.3	0.82
Four or five University courses (N=26)	Transfer In	3.8	0.83
	Transfer Out	3.9	0.70
Two or three University courses (N=28)	Transfer In	3.9	1.00
	Transfer Out	3.9	0.85
Nil or one University course (N=31)	Transfer In	4.2	0.87
	Transfer Out	4.4	0.77

Note: The means or average ($\bar{x}$'s) on the 5-point adequacy scale may be interpreted as follows: 1 - Totally inadequate, 2 - Inadequate, 3 - Somewhat adequate, 4 - Adequate, 5 - Very adequate.

TABLE 118

ADEQUACY OF PRESENT ARRANGEMENTS FOR TRANSFERRING PUPILS IN AND OUT OF SPECIAL CLASS: COMPARISONS OF RATINGS BY SPECIAL CLASS TEACHERS ACCORDING TO RURAL, URBAN AND PROJECT STATUS

Teacher Group Reporting	Transfers In or Out	Summary Statistics	
		$\bar{x}$	SD
All Teachers (N=138)	Transfer In	4.1	0.89
	Transfer Out	4.2	0.81
Zone 1 (LAC) (N=11)	Transfer In	4.0	1.00
	Transfer Out	4.3	0.79
Rural and Small-Urban (N=86)	Transfer In	4.0	0.91
	Transfer Out	4.1	0.85
Large Urban (N=52)	Transfer In	4.2	0.83
	Transfer Out	4.3	0.74
LAC and LAFS (N=21)	Transfer In	4.2	0.81
	Transfer Out	4.2	0.73
LAFS (N=12)	Transfer In	4.2	0.90
	Transfer Out	4.2	0.75

Note: The means or averages ($\bar{x}$'s) on the 5-point adequacy scale may be interpreted as follows: 1 - Totally inadequate, 2 - Inadequate, 3 - Somewhat adequate, 4 - Adequate, 5 - Very adequate.

TABLE 119

ADEQUACY OF PRESENT ARRANGEMENTS FOR TRANSFERRING PUPILS IN AND OUT OF SPECIAL CLASS: COMPARISONS OF RATINGS BY SPECIAL CLASS TEACHERS ACCORDING TO TOTAL TEACHING EXPERIENCE

Teacher Group Reporting	Transfers In or Out	Summary Statistics	
		$\bar{x}$	SD
All Teachers (N=138)	Transfer In	4.1	0.89
	Transfer Out	4.2	0.81
Five or more years (N=89)	Transfer In	4.1	0.87
	Transfer Out	4.2	0.78
Two to four years (N=34)	Transfer In	4.0	0.92
	Transfer Out	4.1	0.91
Nil or one year (N=15)	Transfer In	3.9	0.96
	Transfer Out	4.1	0.76

Note: The means or averages ($\bar{x}$'s) on the 5-point adequacy scale may be interpreted as follows: 1 - Totally inadequate, 2 - Inadequate, 3 - Somewhat adequate, 4 - Adequate, 5 - Very adequate.

Teachers' Comments Regarding Removal or Placement of Pupils	Frequency
1. Present arrangement adequate.	14
2. There should be more involvement of teachers in the removal and placement of students in special classes.	9
3. Procedures or criteria for removal of a student from a special class are not clear.	9
4. Parents should be more involved in the decisions for placement and withdrawal.	8
5. Decisions should be shared by parents, teachers, principals and special education personnel.	7
6. More diagnosis needed re: placement.	4
7. More follow-up is needed on students after discharge from a special class.	4
8. The teacher doesn't decide about placement, the principal or central administrators do.	4
9. The number of children in a special class should be limited or the load becomes too heavy for the teacher to cope with effectively.	4
10. There is an attitude of the teaching staff that the special class is a dumping ground or a catch-all.	4
11. Various types of problems combined in one class result in difficulties in classroom organization. Example: Opportunity students those with emotional problems and underachievers shouldn't be mixed with students requiring remedial help in learning areas.	4
12. Problems should be diagnosed at the early grade levels as remediation becomes more difficult the older the student is.	3
13. Students leave the resource teacher too soon as teachers find someone who needs help more.	3
14. The final decision concerning placement should be up to the resource teacher.	3
15. It is too easy to get children into special classes and too hard to get them out.	3
16. There should be freer movement back and forth between regular and special classes.	3
17. More consultation needed on removal.	2
18. Teachers need more time for diagnosis for placement.	2
19. Students need a transitional period before returning to regular classes full-time.	2

	Frequency
20. More communication is required between the special class and regular class teacher.	2
21. Parents are pleased with the results of their child's special class placement.	2
22. Various methods are being tried since it is the first year for a special program.	2
23. The program has produced results. Two children have returned full-time to the regular stream.	1
24. The time lapse between referral and placement can be too long.	1
25. The system gets bogged down because of lack of personnel.	1
26. The criteria for admission to special classes is too stringent.	1
27. There is pressure for admission to an over-loaded program when there are other children who seem to need help more than those already admitted.	1
28. There are occassional problems with parents re: placement.	1
29. Parent involvement in native area difficult.	1
30. If parents are unahppy, they can decide to withdraw their child from the special class.	1
31. Removal should rest upon the resource teacher after the student has shown he can function in a normal class.	1
32. More boys than girls are referred.	1
33. The special ed teacher should have the most say about removal of pupils as she has the most contact with them and knows them best.	1
34. Other consultants not "emotionally" involved should decide about a student's removal.	1
35. Placement seems to be haphazard and there are teacher and political pressures for placements.	1
36. Parents asked permission to have their child placed in a special class.	1
37. Placement would be adequate if the criteria can be changed to have less emphasis on scores.	1
38. Some teachers are not prepared to implement a recommended program based on diagnosis.	1
39. Regular teachers have expectations that are too high.	1
40. The special ed teacher in consultation with the administrator are reasonably successful in removing kids that wouldn't benefit from a special program.	1

APPENDIX N

THE INTERVIEW FORMS USED FOR THE
ON-SITE SURVEYS OF SPECIAL EDUCATION
TEACHERS AND THEIR ADMINISTRATORS

SURVEY OF SPECIAL EDUCATION SERVICES: INTERVIEW SCHEDULE

The purpose of this interview instrument is to gather information in a systematic manner from a representative sample of special education teachers and administrators. The information gathered will assist in planning in the area of special education. The format and rating scales used will facilitate summarizing the information. However, the respondent should feel free to add additional comments.

Please respond anonymously. Individual respondents will not be identified. Confidentiality will be maintained.

The following procedure will be followed:

1. Both the interviewer and the interviewee will have one copy of the survey form and will follow this form during the interview.

2. The interviewer will record, for each item on the survey, the rating/comments of the teacher or administrator.

3. The interviewer will forward the completed survey form to the Planning and Research Branch, Department of Education.

4. Administrators and central office personnel will respond only to items 3-14*.

SORTING INFORMATION

1. For office use only: (1) (2)

* 2. Position
- a) Itinerant Resource Teacher (three or more Schools) (3)
- b) Resource Room Teacher, half time or less (4)
- c) Resource Room Teacher, more than half time (5)
- d) Special (segregated) Class Teacher (6)
- e) Learning Assistance Centre Teacher (7)
- f) School-based Administrator (8)
- g) Central Office-based Administrator/Supervisor (9)

* 3. Source of Support Services: DIAGNOSIS (at least partly funded by LDF)
- a) Almost entirely provided by school system (10)
- b) Almost entirely provided by purchase or contract of service (11)
- c) Shared by school system and contract personnel (12)
- d) LAC or LAFS personnel (13)
- e) Shared by school system and LAC or LAFS (14)
- f) Little or no support (15)

* 4. Source of Support Services: PROGRAM PLANNING (at least partly funded by LDF)
- a) Almost entirely provided by school system (16)
- b) Almost entirely provided by purchase or contract of service (17)
- c) Shared by school system and contract personnel (18)
- d) LAC or LAFS personnel (19)
- e) Shared by school system and LAC or LAFS (20)
- f) Little or no support (21)

* 5. Source of Support Services: FOLLOW-UP CONSULTATION AND PUPIL EVALUATIONS (at least partly funded by LDF)

* Administrators are asked to complete all those items marked with an asterisk.

a) Almost entirely provided by school system (22)
b) Almost entirely provided by purchase or contract of service (23)
c) Shared by school system and contract personnel (24)
d) LAFS or LAC project personnel (25)
e) Shared by school system and LAFS or LAC (26)
f) Little or no support (27)

* 6. Source of Support Services: INSERVICE
a) Almost entirely provided by school system (28)
b) Almost entirely provided by purchase or contract of service (29)
c) Shared by school system and contract personnel (30)
d) LAFS or LAC project personnel (31)
e) Shared by school system and LAFS or LAC (32)
f) Little or no support (33)

7. Teacher Training: Number of Full Courses in Special Education and Related Subjects
a) More than five (34)
b) Four or five (35)
c) Three, but less than four (36)
d) Two, but less than three (37)
e) One, but less than two (38)
f) None (39)

8. Total Teaching Experience
a) More than 10 years (40)
b) Five, but less than ten (41)
c) Two, but less than five (42)
d) One, but less than two (43)
e) Less than one (44)

9. Teacher Experience in Special Education
a) More than 10 years (45)
b) Five, but less than ten (46)
c) Two, but less than five (47)
d) One, but less than two (48)
e) Less than one (49)

10. Student Characteristics
a) Number of home rooms from which children are drawn ___(50)
b) The number of grades/years in school represented in the class ___(51)
c) The range in reading achievement in the class (grade equivalents from ___ to ___) ___(52)
d) Number of students who are from other school systems ___(53)
e) Does the school or system have policies or routine procedures concerning placement of students in Special Class? Yes (54)
No (55)

SUPPORT SERVICES USED BY SPECIAL CLASS AND REGULAR CLASS TEACHERS

Please indicate the kind, amount and the perceived adequacy of the service provided by the personnel indicated. Use the following scales:

KIND OF SERVICE	FREQUENCY OF SERVICE	ADEQUACY OF SERVICE
1. None	1. Never	1. Seldom or Never Useful
2. Diagnosis, for placement purposes	2. Infrequently	2. Sometimes Useful
3. Program Planning	3. Sometimes	3. Useful about half the time
4. Follow-up Consultation	4. Frequently	4. Often Useful
5. Inservice	5. Very Frequently	5. Very Often Useful

*11. PSYCHOLOGISTS from Mental Health Services (Guidance Clinics)	Kind	1	2	3	4	5	(56)
	Frequency	1	2	3	4	5	(57)
	Adequacy	1	2	3	4	5	(58)
School System	Kind	1	2	3	4	5	(59)
	Frequency	1	2	3	4	5	(60)
	Adequacy	1	2	3	4	5	(61)
Contracted	Kind	1	2	3	4	5	(62)
	Frequency	1	2	3	4	5	(63)
	Adequacy	1	2	3	4	5	(64)
LAC or LAFS Project (Educational or School Psychologists)	Kind	1	2	3	4	5	(65)
	Frequency	1	2	3	4	5	(66)
	Adequacy	1	2	3	4	5	(67)
Glenrose or Calgary Childrens Hospital	Kind	1	2	3	4	5	(68)
	Frequency	1	2	3	4	5	(69)
	Adequacy	1	2	3	4	5	(70)
*12. PSYCHIATRISTS from Mental Health Services (Guidance Clinics)	Kind	1	2	3	4	5	(71)
	Frequency	1	2	3	4	5	(72)
	Adequacy	1	2	3	4	5	(73)
School System	Kind	1	2	3	4	5	(74)
	Frequency	1	2	3	4	5	(75)
	Adequacy	1	2	3	4	5	(76)
Contracted	Kind	1	2	3	4	5	(77)
	Frequency	1	2	3	4	5	(78)
	Adequacy	1	2	3	4	5	(79)
Glenrose or Calgary Childrens Hospital	Kind	1	2	3	4	5	(80)
	Frequency	1	2	3	4	5	(81)
	Adequacy	1	2	3	4	5	(82)

KIND OF SERVICE	FREQUENCY OF SERVICE	ADEQUACY OF SERVICE
1. None	1. Never	1. Seldom or Never Useful
2. Diagnosis, for placement purposes	2. Infrequently	2. Sometimes Useful
3. Program Planning	3. Sometimes	3. Useful about half the time
4. Follow-up Consultation	4. Frequently	4. Often Useful
5. Inservice	5. Very Frequently	5. Very Often Useful

* 13. SOCIAL WORKERS ETC. FROM Mental Health Services (Guidance Clinics)	Kind	1	2	3	4	5	(83)
	Frequency	1	2	3	4	5	(84)
	Adequacy	1	2	3	4	5	(85)
Division of Services for the Handicapped	Kind	1	2	3	4	5	(86)
	Frequency	1	2	3	4	5	(87)
	Adequacy	1	2	3	4	5	(88)
Employed by School Systems	Kind	1	2	3	4	5	(89)
	Frequency	1	2	3	4	5	(90)
	Adequacy	1	2	3	4	5	(91)
Other Gov't Agencies (Dept. of Social Services & Community Health, including these hospitals: Glenrose, Calgary Children's, Camsell)	Kind	1	2	3	4	5	(92)
	Frequency	1	2	3	4	5	(93)
	Adequacy	1	2	3	4	5	(94)
* 14. HEALTH PERSONNEL FROM Health Units or City Boards of Health	Kind	1	2	3	4	5	(95)
	Frequency	1	2	3	4	5	(96)
	Adequacy	1	2	3	4	5	(97)
Family Physician	Kind	1	2	3	4	5	(98)
	Frequency	1	2	3	4	5	(99)
	Adequacy	1	2	3	4	5	(100)
Specialists (pediatricians, neurologists, opthamoligists, physio and occupational therapists, others)	Kind	1	2	3	4	5	(101)
	Frequency	1	2	3	4	5	(102)
	Adequacy	1	2	3	4	5	(103)
* 15. ALBERTA EDUCATION CONSULTANTS (include guidance, curriculum and special ed; exclude LAC or LAFS)	Kind	1	2	3	4	5	(104)
	Frequency	1	2	3	4	5	(105)
	Adequacy	1	2	3	4	5	(106)
* 16. LAC or LAFS CONSULTANTS (exclude Educational or School Psychologists, speech therapist, and psychologists)	Kind	1	2	3	4	5	(107)
	Frequency	1	2	3	4	5	(108)
	Adequacy	1	2	3	4	5	(109)

KIND OF SERVICE	FREQUENCY OF SERVICE	ADEQUACY OF SERVICE
1. None 2. Diagnosis, for placement purposes 3. Program Planning 4. Follow-up Consultation 5. Inservice	1. Never 2. Infrequently 3. Sometimes 4. Frequently 5. Very Frequently	1. Seldom or Never Useful 2. Sometimes Useful 3. Useful about half the time 4. Often Useful 5. Very Often Useful

*17.	SPEECH THERAPY/PATHOLOGY from Health Units or City Boards of Health	Kind	1	2	3	4	5	(110)
		Frequency	1	2	3	4	5	(111)
		Adequacy	1	2	3	4	5	(112)
	School System	Kind	1	2	3	4	5	(113)
		Frequency	1	2	3	4	5	(114)
		Adequacy	1	2	3	4	5	(115)
	Contracted	Kind	1	2	3	4	5	(116)
		Frequency	1	2	3	4	5	(117)
		Adequacy	1	2	3	4	5	(118)
	LAC	Kind	1	2	3	4	5	(119)
		Frequency	1	2	3	4	5	(120)
		Adequacy	1	2	3	4	5	(121)
*18.	SCHOOL SYSTEM PERSONNEL Guidance-Counsellors -Directors -Consultants -etc.	Kind	1	2	3	4	5	(122)
		Frequency	1	2	3	4	5	(123)
		Adequacy	1	2	3	4	5	(124)
	Special Education -Directors -Remediation Consultants -Bureau of Child Study -Others	Kind	1	2	3	4	5	(125)
		Frequency	1	2	3	4	5	(126)
		Adequacy	1	2	3	4	5	(127)
	Consultants or Supervisors (Language Arts, Reading, Arithmetic, etc.)	Kind	1	2	3	4	5	(128)
		Frequency	1	2	3	4	5	(129)
		Adequacy	1	2	3	4	5	(130)
	School-Based Administrators	Kind	1	2	3	4	5	(131)
		Frequency	1	2	3	4	5	(132)
		Adequacy	1	2	3	4	5	(133)
	Centrally-based Administrators (Asst. Superintendents, Superintendents, Curriculum Directors)	Kind	1	2	3	4	5	(134)
		Frequency	1	2	3	4	5	(135)
		Adequacy	1	2	3	4	5	(136)
* 19.	FREE UNIVERSITY CLINICS	Kind	1	2	3	4	5	(137)
		Frequency	1	2	3	4	5	(138)
		Adequacy	1	2	3	4	5	(139)

* SUPPORT SERVICES: OPEN-ENDED COMMENTS

additional observations, suggestions for change, improvements etc.
diagnosis for placement only

_____

_____

_____

_____

diagnosis for placement and for program planning

_____

_____

_____

_____

program planning

_____

_____

_____

_____

follow-up consultations

_____

_____

_____

_____

inservice

_____

_____

_____

_____

other

_____

_____

_____

_____

SUPPORT SERVICE TO OTHER TEACHERS PROVIDED BY SPECIAL CLASS TEACHERS

In varying degrees, Special Class Teachers provide consultative assistance to other teachers. The items which follow attempt to gather information about this consultant role.

* Do administrators expect Special Class Teachers to provide consultative service to other teachers? Generally Yes (140)
  Generally No (141)

* Is the consulting role facilitated by administrators?
  Generally Yes (142)
  Generally No (143)

Please use the following scales in responding to items 144-179.

* SPECIAL TEACHER'S WILLINGNESS TO PROVIDE SERVICE	* OTHER TEACHER'S WILLINGNESS TO RECEIVE SERVICE	* FREQUENCY OF ACTUAL SERVICE	* ADEQUACY
1. Very unwilling	1. Very unwilling	1. Rarely or Never	1. Very Inadequate
2. Unwilling	2. Unwilling	2. Infrequently	2. Inadequate
3. Sometimes willing, sometimes unwilling	3. Sometimes willing, sometimes unwilling	3. Sometimes	3. Sometimes adequate, sometimes inadequate
4. Willing	4. Willing	4. Frequently	4. Adequate
5. Very willing	5. Very willing	5. Very Frequently	5. Very adequate

20. ASSISTING OTHER TEACHER DIAGNOSE PROBLEMS AND PLAN PROGRAMS CLASSIFIED AS

Behaviour & Social-Emotional	Willingness to provide	1	2	3	4	5	(144)
	Willingness to receive	1	2	3	4	5	(145)
	Frequency	1	2	3	4	5	(146)
	Adequacy	1	2	3	4	5	(147)
Reading	Willingness to provide	1	2	3	4	5	(148)
	Willingness to receive	1	2	3	4	5	(149)
	Frequency	1	2	3	4	5	(150)
	Adequacy	1	2	3	4	5	(151)
Listening	Willingness to provide	1	2	3	4	5	(152)
	Willingness to receive	1	2	3	4	5	(153)
	Frequency	1	2	3	4	5	(154)
	Adequacy	1	2	3	4	5	(155)
Writing	Willingness to provide	1	2	3	4	5	(156)
	Willingness to receive	1	2	3	4	5	(157)
	Frequency	1	2	3	4	5	(158)
	Adequacy	1	2	3	4	5	(159)
Speaking	Willingness to provide	1	2	3	4	5	(160)
	Willingness to receive	1	2	3	4	5	(161)
	Frequency	1	2	3	4	5	(162)
	Adequacy	1	2	3	4	5	(163)
Arithmetic	Willingness to provide	1	2	3	4	5	(164)
	Willingness to receive	1	2	3	4	5	(165)
	Frequency	1	2	3	4	5	(166)
	Adequacy	1	2	3	4	5	(167)
Perception (visual, auditory, tactile) and Motor	Willingness to provide	1	2	3	4	5	(168)
	Willingness to receive	1	2	3	4	5	(169)
	Frequency	1	2	3	4	5	(170)
	Adequacy	1	2	3	4	5	(171)

SPECIAL TEACHER'S WILLINGNESS TO PROVIDE SERVICE	OTHER TEACHER'S WILLINGNESS TO RECEIVE SERVICE	FREQUENCY OF ACTUAL SERVICE	ADEQUACY
1. Very unwilling	1. Very unwilling	1. Rarely or Never	1. Very Inadequate
2. Unwilling	2. Unwilling	2. Infrequently	2. Inadequate
3. Sometimes willing, sometimes unwilling	3. Sometimes willing, sometimes unwilling	3. Sometimes	3. Sometimes adequate, sometimes inadequate
4. Willing	4. Willing	4. Frequently	4. Adequate
5. Very willing	5. Very willing	5. Very Frequently	5. Very adequate

21.	FOLLOW-UP CONSULTATION WITH OTHER TEACHERS	Willingness to provide	1	2	3	4	5	(172)
		Willingness to receive	1	2	3	4	5	(173)
		Frequency	1	2	3	4	5	(174)
		Adequacy	1	2	3	4	5	(175)
22.	ASSISTING IN PROVIDING INSERVICE EDUCATION FOR OTHER TEACHERS	Willingness to provide	1	2	3	4	5	(176)
		Willingness to receive	1	2	3	4	5	(177)
		Frequency	1	2	3	4	5	(178)
		Adequacy	1	2	3	4	5	(179)

* COMMENTS ON SPECIAL TEACHER'S ROLE IN ASSISTING OTHERS

_____

_____

_____

_____

_____

_____

_____

TEACHING AND LEARNING IN THE SPECIAL CLASS

The information from this section of the survey will be used in providing summary information concerning perceptions about the variety of teaching and learning situations which prevail throughout the province. The summaries will be helpful in improving instruction.

cont. page 7

23. JUDGEMENTS ABOUT MATERIALS AND EQUIPMENT

USEFUL AND VERY USEFUL

Title (name)	Supplier	FREQUENCY OF USE (✓) Seldom	Moderately	Often

INEFFECTIVE OR NOT USEFUL

Title (name)	Supplier	FREQUENCY OF USE (✓) Seldom	Moderately	Often

SCHEDULING (Timetabling) IN USE

24. Sizes of groups in Special Classroom during the week:

SIZES OF GROUPS IN SPECIAL CLASSROOM DURING THE WEEK			AVERAGE LENGTH OF REMEDIATION: TIME PER STUDENT IN EACH GROUP PER DAY IN SPECIAL CLASS	
Smallest group:	___ student(s)	(180)	___ minutes	(183)
Largest group:	___ students	(181)	___ minutes	(184)
Average group:	___ students	(182)	___ minutes	(185)

___ Total remedial teaching minutes per week (186)

25. Average number of consultation contacts with other teachers per week is ____ (187). Average length of contact is ____ minutes (188) ____ total contact-minutes per week (189).

26. EFFICACY AND PROPORTION OF TIME FOR PEDOGICAL PRACTICES EMPLOYED

Please use the following scales:

PROPORTION OF TOTAL TEACHING TIME	EFFICACY (efficiency) AND PRODUCTIVENESS OF THE METHOD
1. Not used (or used rarely)	1. Very ineffective
2. Less than 5%	2. Ineffective
3. 5 - 10%	3. Somewhat effective
4. 11 - 20%	4. Effective
5. 21 - 100%	5. Very effective

TEACHING	EXTENT AND ADEQUACY	RATING
Teacher	Time	1 2 3 4 5 (190)
	Efficacy	1 2 3 4 5 (191)
Paid Aide	Time	1 2 3 4 5 (192)
	Efficacy	1 2 3 4 5 (193)
Volunteer Aide (including parent)	Time	1 2 3 4 5 (194)
	Efficacy	1 2 3 4 5 (195)
Student Tutor	Time	1 2 3 4 5 (196)
	Efficacy	1 2 3 4 5 (197)
Independent Study (little assistance from teacher, aide or machines)	Time	1 2 3 4 5 (198)
	Efficacy	1 2 3 4 5 (199)
Teaching Machines (language master, listening station, voice mirror, tape recorder, etc.)	Time	1 2 3 4 5 (200)
	Efficacy	1 2 3 4 5 (201)
Pairs Practice (two remedial pupils share an activity)	Time	1 2 3 4 5 (202)
	Efficacy	1 2 3 4 5 (203)

27. DIAGNOSIS, PROGRAM PLANNING, PROGRAM IMPLEMENTATION (teaching) AND FOLLOW-UP: RESPONSIBILITY, ADEQUACY AND CONGRUENCY

Items 232 - 203 seek answers to these questions:

1. How are diagnosis and program planning shared between the teacher and others?
2. How adequate were the diagnosis, program planning and teaching?
3. How congruent (how closely matched) is the plan to the diagnosis, and the implementation (teaching) to the plan?

Please use these rating scales:

cont. page 9

PROPORTION OF PUPILS	ADEQUACY	CONGRUENCY WITH DIAGNOSIS OR PLAN
1. None	1. Very inadequate	1. Very Different
2. Less than 5%	2. Inadequate	2. Not Related
3. 5 - 10%	3. Sometimes adequate Sometimes inadequate	3. Somewhat Similar
4. 11 - 20%	4. Adequate	4. Quite Similar
5. 21 - 100%	5. Very adequate	5. Very Similar

READING AND SPELLING

Reading and Spelling Diagnosis						
By self - Proportion of pupils	1	2	3	4	5	(204)
- Adequacy	1	2	3	4	5	(205)
By others - Proportion of pupils	1	2	3	4	5	(206)
- Adequacy	1	2	3	4	5	(207)
Program Planning (Reading and Spelling)						
By self - Proportion	1	2	3	4	5	(208)
- Adequacy	1	2	3	4	5	(209)
- Congruency with diagnosis	1	2	3	4	5	(210)
By others - Proportion	1	2	3	4	5	(211)
- Adequacy	1	2	3	4	5	(212)
- Congruency with diagnosis	1	2	3	4	5	(213)
Teaching Reading and Spelling						
By self - Adequacy	1	2	3	4	5	(214)
- Congruency with plan	1	2	3	4	5	(215)

LANGUAGE (Writing, speaking, listening)

Language Diagnosis						
By self - Proportion of pupils	1	2	3	4	5	(216)
- Adequacy	1	2	3	4	5	(217)
By others - Proportion of pupils	1	2	3	4	5	(218)
- Adequacy	1	2	3	4	5	(219)
Program Planning (Writing, speaking, listening)						
By self - Proportion of pupils	1	2	3	4	5	(220)
- Adequacy	1	2	3	4	5	(221)
- Congruency with diagnosis	1	2	3	4	5	(222)
By others - Proportion	1	2	3	4	5	(223)
- Adequacy	1	2	3	4	5	(224)
- Congruency with diagnosis	1	2	3	4	5	(225)
Teaching Language						
By self - Adequacy	1	2	3	4	5	(226)
- Congruency with plan	1	2	3	4	5	(227)

ARITHMETIC

Arithmetic Diagnosis						
By self - Proportion of pupils	1	2	3	4	5	(228)
- Adequacy	1	2	3	4	5	(229)
By others - Proportion of pupils	1	2	3	4	5	(230)
- Adequacy	1	2	3	4	5	(231)
Program Planning (Arithmetic)						
By self - Proportion of pupils	1	2	3	4	5	(232)
- Adequacy	1	2	3	4	5	(233)
- Congruency with diagnosis	1	2	3	4	5	(234)
By others - Proportion of pupils	1	2	3	4	5	(235)
- Adequacy	1	2	3	4	5	(236)
- Congruency with diagnosis	1	2	3	4	5	(237)
Teaching Arithmetic						
By self - Adequacy	1	2	3	4	5	(238)
- Congruency with plan	1	2	3	4	5	(239)

PROPORTION OF PUPILS	ADEQUACY	CONGRUENCY WITH DIAGNOSIS OR PLAN
1. None	1. Very Inadequate	1. Very Different
2. Less than 5%	2. Inadequate	2. Not Related
3. 5 - 10%	3. Sometimes adequate Sometimes inadequate	3. Somewhat Similar
4. 11 - 20%	4. Adequate	4. Quite Similar
5. 21 - 100%	5. Very Adequate	5. Very Similar

SOCIAL-EMOTIONAL

Social-Emotional Diagnosis

By self - Proportion of pupils	1	2	3	4	5	(240)
- Adequacy	1	2	3	4	5	(241)
By others - Proportion of pupils	1	2	3	4	5	(242)
- Adequacy	1	2	3	4	5	(243)

Planning Programs (Social-emotional)

By-self - Proportion of pupils	1	2	3	4	5	(244)
- Adequacy	1	2	3	4	5	(245)
- Congruency with diagnosis	1	2	3	4	5	(246)
By others - Proportion of pupils	1	2	3	4	5	(247)
- Adequacy	1	2	3	4	5	(248)
- Congruency with diagnosis	1	2	3	4	5	(249)

Teaching (remediating) in the social-emotional area

By self - Adequacy	1	2	3	4	5	(250)
- Congruency with plan	1	2	3	4	5	(251)

PERCEPTION AND/OR MOTOR SKILLS

Perceptual/Motor Diagnosis

By self - Proportion of pupils	1	2	3	4	5	(252)
- Adequacy	1	2	3	4	5	(253)
By others - Proportion of pupils	1	2	3	4	5	(254)
- Adequacy	1	2	3	4	5	(255)

Program Planning (perception/motor)

By self - Proportion of pupils	1	2	3	4	5	(256)
- Adequacy	1	2	3	4	5	(257)
- Congruency with diagnosis	1	2	3	4	5	(258)
By others - Proportion of pupils	1	2	3	4	5	(259)
- Adequacy	1	2	3	4	5	(260)
- Congruency with diagnosis	1	2	3	4	5	(261)

Teaching (remediating) Perception and/or Motor

By self - Adequacy	1	2	3	4	5	(262)
- Congruency with plan	1	2	3	4	5	(263)

FOLLOW-UP OF PUPIL PROGRESS (By self: to other classrooms; By others: to your class or the school)

By self - Proportion of pupils	1	2	3	4	5	(264)
- Adequacy	1	2	3	4	5	(265)
- Congruency with plan	1	2	3	4	5	(266)
By others - Proportion of pupils	1	2	3	4	5	(267)
- Adequacy	1	2	3	4	5	(268)
- Congruency with plan	1	2	3	4	5	(269)

28. WHO DECIDES ABOUT PLACEMENT AND REMOVAL OF PUPILS FROM THE SPECIAL PROGRAMS?

Please indicate the proportion of students for whom the following arrangements apply for either placement or removal.

PROPORTION	ADEQUACY
1. Nil or very low	1. Totally inadequate
2. Less than 25%	2. Inadequate
3. 25 - 49%	3. Somewhat adequate
4. 50 - 74%	4. Adequate
5. 75% or more	5. Very adequate

PLACEMENT

Teachers decide	1	2	3	4	5	(270)
Administrators/Consultants decide	1	2	3	4	5	(271)
Parents decide	1	2	3	4	5	(272)
Adequacy of present arrangements	1	2	3	4	5	(273)

REMOVAL

Teachers decide	1	2	3	4	5	(274)
Administrators/Consultants decide	1	2	3	4	5	(275)
Parents decide	1	2	3	4	5	(276)
Adequacy of present arrangements	1	2	3	4	5	(277)

Comments regarding placement or removal of pupils

_____

_____

_____

_____

_____

_____